BRITISH COUNCIL

Technical Report

Aptis for Teens: Analysis of Pilot Test Data

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1. BACKGROUND

1.1   Introduction to the Aptis Test System

The Aptis test system was developed by the British Council, which works directly with organisations to provide tests of English as a Second or Foreign language (ESL/EFL) proficiency for a range of assessment needs. Aptis is a test of general English proficiency designed for adult and young adult learners aged 16 years or over. It is not a certificated test, in that the results obtained from it cannot be used as evidence of English language proficiency to satisfy university entrance requirements or immigration conditions. The approach to test development underlying the Aptis testing system is to maximize flexibility, to be responsive to user needs, and to work with users within a framework of localization where such changes are deemed necessary and appropriate. The theoretical models underpinning the test design and validation are outlined in detail in O'Sullivan (2012).

The Aptis test system has five components: Core (grammar and vocabulary), Reading, Listening, Writing and Speaking. Although the Core component is always administered, organisations are able to select any combination of the other components according to their individual needs. Aptis is usually taken as a computer-based test (CBT) although the Core test and the Reading and Writing tests can also be taken using a traditional pen and paper delivery option. The Listening and Speaking tests are also available via telephone delivery.

Aptis test results are reported on a numerical scale (0 – 50) and as a Common European Framework of Reference for Languages (CEFR) level. The CEFR is a comprehensive approach to describing proficiency across six levels: Basic user (A1 – A2); Independent user (B1 – B2); and Proficient user (C1 – C2). The Aptis General test, the first variant within the Aptis test system, currently assesses abilities across four of the CEFR levels (A1 – B2). If a candidate does not receive a high enough score to achieve A1, s/he will receive a score of A0; if a candidate achieves a near perfect score on the test, s/he is likely to be at the C level and so will receive a score of C. Aptis General does not, at this time, distinguish between C1 and C2.

1.2   Rationale for the development of Aptis for Teens

The Aptis General test is not designed to be used with learners under the age of 16. However, due to the high level of interest from schools and education ministries in using the Aptis test with younger learners, and in an attempt to prevent inappropriate uses of Aptis General, it was decided to investigate the feasibility of adapting the test for learners aged 13 – 15 years for whom English is a second or foreign language. Although the test is primarily designed for learners in the core age group, it is envisaged that the test may also be appropriate in some situations for 12- and 16-year-old learners.

Learners in the core target range will generally be in formal education in lower-secondary, middle school or junior high schools, depending on the geographical context.

Aptis for Teens is designed to work within the same frame of reference as Aptis General and to operationalise the same core concepts of flexibility and efficiency. The approach taken has been to work within the explicit model of validation which underpins the Aptis test system and to make use of the measurement scale and test specifications validated for Aptis General, while at the same time creating a version relevant for young learners in the target age group.

The Target Language Use domain (TLU) is primarily EFL/ESL contexts in which English is studied at school and/or in language learning programmes outside school. An important use of the target language for these learners is as a subject of study or as a medium of instruction to study other subjects.

1.3   Task development and initial trialling

The tasks in Aptis for Teens follow the format of Aptis General. Grammar and Vocabulary is offered as a core component in combination with the other skills of Reading, Listening, Speaking and Writing, as required by the user institution. The task format across all components makes use of the computer delivery mode to utilise a range of response formats, and to approximate real-life language use situations that young learners may encounter online. Task parameters such as topic, genre and the intended audience are designed to be relevant to the TLU domain and target test-takers, and are made explicit to help contextualise tasks.

Initial trials were conducted in 12 countries in various parts of the world between 16 June and 10 July 2014, with 638 test-takers participating. The 12 countries were Austria, Bangladesh, China, Colombia, Cyprus, Germany, Greece, Jordan, Lebanon, Mauritius, Morocco and Portugal.

2.   METHODS

2.1   Participants

The pilot test-taker numbers vary for each test component. After removing data from administrative staff and those without candidate reference IDs, a further 253 IDs were removed from Grammar and Vocabulary (G&V) because: 1) their response data consisted solely of 'N/A'; and 2) the 'user mark' equals zero. Table 1 shows the number of participants in the four versions of Listening and Reading, before and after data cleaning for G&V.

Table 1: Number of pilot participants

	G&V	Listen V1	Listen V2	Listen V3	Listen V4	Read V1	Read V2	Read V3	Read V4
TOTAL	863	156	138	269	460	156	138	268	462
Removed-1	12	8	7	3	4	8	6	5	3
Removed-2	252	22	4	51	322	23	5	48	145
Remaining	598	126	127	215	134	125	127	215	314

Note: Removed-1 are admin staff and entries without candidate ref number; removed-2 are the cases where total mark is zero and data consists of N/As

In term of the Speaking data, 185 candidates took one of the four versions of the Speaking component. The number of test-takers who took the four versions are 98, 25, 37 and 25 respectively. Four raters rated the performances, and their rating profile is listed below.

- Rater 1 rated all candidates in Version 1 and Version 3.

- Rater 2 and Rater 3 each rated the same 22 candidates in V1 and all candidates in Version 2, Version 3, and Version 4.

- Rater 4 did not rate complete candidate performances but rated some individual tasks across all versions.

Task 1 in Speaking was treated as the same task across all four versions. This is an assumption of the analysis which it is important to recognize. In fact there are eight possible variations of three personal questions, and each candidate is allocated one of the eight variations randomly. As all of the questions were created to the same specifications (for beginner-level candidates to provide simple personal information), the eight possible variations have been treated as interchangeable for this analysis. The ratings for Task 1 were treated as being on the same task for all candidates across all four versions.

The overlapping rating pattern as described above ensures sufficient linking to compare rater severity measures, and treating Task 1 as a common item across all versions ensures that all tasks and test-takers are also sufficiently linked to compare item difficulty and person ability measures across versions.

In terms of the Writing data, 178 candidates took one of the four versions of the Writing component. The numbers of test-takers who took the four versions are 100, 25, 28 and 25 respectively. As there are no common items or test-takers across versions, the FACETS analysis has produced four subsets corresponding to each of the four versions. Four raters rated the performances, and their rating profile is listed below. Sufficient linking was achieved for raters. All severity measures for raters are thus comparable.

- Rater 1 rated all candidates in V1 and V3.
- Rater 2 and Rater 3 each rated the same 25 candidates in V1 and all candidates in V2, V3, and V4.
- Rater 4 did not rate complete candidate performances but rated some individual tasks across all versions.

2.2   Approach

Data from Grammar & Vocabulary, Listening and Reading were analysed using Winsteps, the programme that was used for the analysis of the same components of Aptis General. All Grammar & Vocabulary items were taken from Aptis General. For the Listening and Reading data, different numbers of previously calibrated Aptis General test items were built into this pilot. Therefore, both anchored models and unanchored models were evaluated.

In order to compare the parameters derived from Aptis General Speaking and Writing components, data from Speaking and Writing in this pilot were analysed using FACETS. This programme is used also because it allows for the checking of rater behaviour in terms of severity or leniency. All items in these two test components were specifically designed for the target test population; the analyses were therefore run independently using data from the two skills. Rater behaviour was also evaluated as an additional quality control measure.

The major objective of the analysis is to inform the construction of an operational Aptis Teens live test. Specifically, the aims of the analysis include:

1) comparison of anchor item performance from Aptis General and Aptis for Teens (for the Reading and Listening components)
2) obtaining item difficulty indices for all five test components
3) obtaining item fit indices for all five test components.

The results of the analyses are presented in three sections. Section I contains results from the first three test components, i.e., Grammar & Vocabulary, Listening, and Reading. Section II contains results from Speaking and Writing. Section III reports test-taker performance evaluation and rater evaluation.

3. RESULTS

3.1 Section I: Grammar & Vocabulary, Listening, Reading

3.1.1 Data preparation

Grammar & Vocabulary is a core test component which is the same across all four pilot test versions. Listening and Reading data from different versions were combined separately. To achieve the combined listening dataset, the eight anchor items were listed as the first eight items (out of which, six have anchor values) when all candidates scores were entered (n=598). The other listening items from the four sets were combined with blocks of data from each set to allow a concurrent analysis of the listening component. Similar procedures were followed for the reading data. There was only one reading anchor item which was re-scaled to get a whole number based on an 8-point scale, instead of the 7-point scale which is used for Aptis General. Rasch analysis using Winsteps was carried out. Results from both classical test theory (CTT) and Item Response Theory (IRT) analyses are reported below.

3.1.2 Grammar & vocabulary

Grammar & Vocabulary from Aptis General was piloted with this teenage sample. Rasch analysis was performed to generate the item difficulty values and quality control measures, including infit and outfit indices (see Appendix A). The results of the analyses indicate that: 1) only one Grammar item (GR_P3925) has higher than the threshold outfit index (>1.5); and 2) the item difficulty of Vocabulary increases in difficulty along with the progression of CEFR levels (see Table 2).

Table 2: Vocabulary item logit values

A1_P3633	0.21
A2_P3642	0.31
B1_P3654	-0.15
B1_P3651	1.67
B2_ P3659	2.81

3.1.3 Comparing Aptis Teens to Aptis General: anchor item performance evaluation

Item logit values for Grammar & Vocabulary from Aptis General were compared with the item logit values from Aptis for Teens; the results are presented below.

The results indicate that the alignment of Grammar is much better than the alignment of Vocabulary. Figure 1 demonstrates a comparison with the data from both Grammar and Vocabulary. Grammar performance from the two test-taker populations is comparable (see Figure 2, r= 0.84, r squared = 0.71). However, Vocabulary performance from the two groups is quite different (see Figure 3, r = 0.47, r squared = 0.22).

Figure 1: Grammar & Vocabulary item difficulty comparison
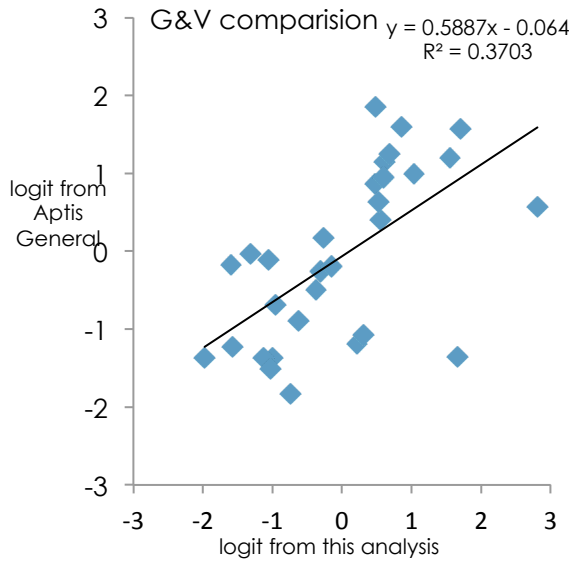
Figure 2: Grammar item difficulty comparison

G&V comparision

$y = 0.5887x - 0.064$
$R^2 = 0.3703$

logit from Aptis General (y-axis)

logit from this analysis (x-axis)

Grammar comparison

$y = 0.9158x + 0.2305$
$R^2 = 0.71018$

logit from Aptis General (y-axis)

logit from this analysis (x-axis)
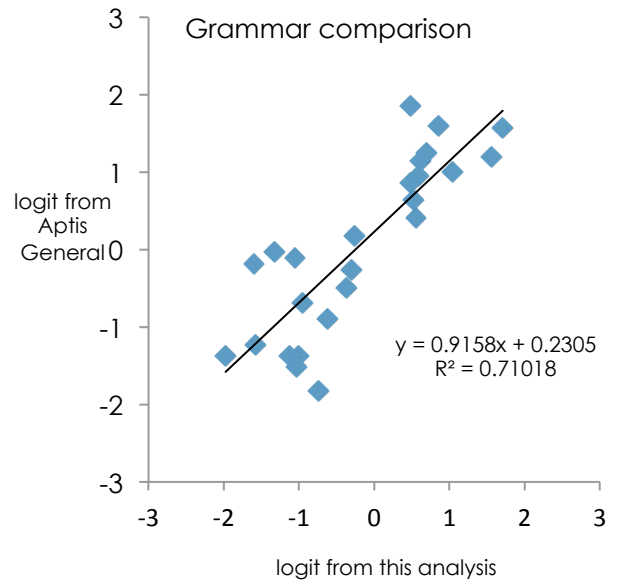
Figure 3: Vocabulary item difficulty comparison

Voc comparison

$y = 0.3134x - 0.9522$
$R^2 = 0.22537$

logit from Aptis General (y-axis)

logit from this analysis (x-axis)
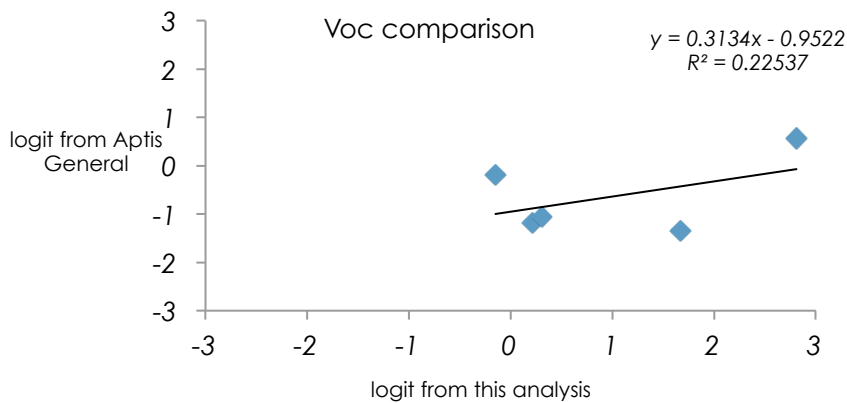
Table 3: Grammar & Vocabulary CTT results

	Avg Pt-biserial	Avg scr	Avg prop corr	Reliability	SEM	Avg scr-TT level	SD-TT level	Max	Min
G&V	0.58	0.65	1.55	0.81	4.58	28.13	10.38	49	2

Table 3 shows the average point-biserial correlation of the Grammar & Vocabulary section is 0.58, which is satisfactory. The reliability of this section is 0.81, with SEM = 4.58. (Note: item 3520P3604 has zero variance and is removed from the analysis.)

Table 4 shows item fit indices in the order of logit values. As shown in the item label column, the five Vocabulary items (highlighted) are indicated with the intended CEFR levels from A1 to B2. Overall, item difficulties, indicated by the logit values in the Measure column, increase as the intended CEFR levels progress. The one exception is item B1_P3654, which seems to be easier than the A1 and A2 items (A1_P3633 and A2_P3642). The Grammar item logits range from the most difficult item GR_P3903 (1.71) to the easiest item GR_P3921 (-1.98).

The p-value column indicates the percentage correct for dichotomous Grammar items (Min = 0.31; Max = 0.90). For the polytomously scored Vocabulary items, p-values indicate the average percentage correct out of the max scores (Min = 1.02, Max = 3.46).

Table 4: Item fit indices measurement report (Grammar & Vocabulary)

ENTRY	Item label	MEASURE	PVALUE	COUNT	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.ZSTD
29	B2_ P3659	2.81	1.02	598	1.29	4.33	1.44	6.33
20	GR_P3903	1.71	0.31	598	1.20	3.79	1.32	3.52
28	B1_P3651	1.67	1.62	598	0.88	-1.97	0.92	-1.15
21	GR_P3904	1.56	0.34	598	1.03	0.68	1.28	3.33
10	GR_P3886	1.04	0.43	598	1.16	3.74	1.23	3.11
3	GR_P3870	0.85	0.46	598	0.93	-1.82	0.90	-1.45
16	GR_P3893	0.69	0.50	598	1.06	1.68	1.05	0.70
15	GR_P3892	0.62	0.51	598	1.14	3.72	1.28	3.58
22	GR_P3905	0.59	0.52	598	0.96	-0.98	0.94	-0.87
11	GR_P3887	0.56	0.52	598	1.07	1.82	1.07	0.91
17	GR_P3897	0.52	0.53	598	0.97	-0.75	0.95	-0.62
1	GR_P3858	0.49	0.54	598	1.18	4.74	1.25	3.17
2	GR_P3864	0.48	0.54	598	0.90	-2.86	0.86	-1.92
26	A2_P3642	0.31	2.87	598	0.78	-4.11	0.73	-3.98
27	A1_P3633	0.21	2.99	598	0.72	-5.44	0.72	-4.38
30	B1_P3654	-0.15	3.46	598	0.76	-4.07	0.81	-2.20
23	GR_P3920	-0.27	0.68	598	1.07	1.65	1.13	1.23
9	GR_P3885	-0.30	0.68	598	1.03	0.68	1.00	0.01
19	GR_P3902	-0.37	0.69	598	1.04	0.97	1.28	2.33
14	GR_P3891	-0.62	0.74	598	0.85	-3.41	0.69	-2.69
8	GR_P3884	-0.74	0.75	598	1.00	-0.04	1.31	2.19
12	GR_P3888	-0.95	0.79	598	0.94	-1.04	0.81	-1.38
25	GR_P3923	-1.00	0.79	598	0.98	-0.40	1.03	0.22
7	GR_P3883	-1.03	0.80	598	0.87	-2.31	0.63	-2.87
18	GR_P3899	-1.05	0.80	598	0.99	-0.21	1.10	0.71
6	GR_P3881	-1.13	0.81	598	0.89	-1.89	0.72	-1.98
4	GR_P3925	-1.33	0.83	598	1.22	3.06	1.87	4.19
5	GR_P3927	-1.58	0.86	598	0.91	-1.20	0.74	-1.48
13	GR_P3890	-1.60	0.86	598	0.95	-0.57	0.75	-1.36
24	GR_P3921	-1.98	0.90	598	0.94	-0.56	0.97	-0.07

3.1.4 Listening

This section reports the results from the analyses of the Listening data. Item logit values for six listening anchor items from Aptis General and from Aptis for Teens are compared and presented in Table 5 and Figure 4. Rasch analysis was performed to generate the Listening item difficulty values and quality control measures, including infit and outfit indices (see Appendix B).

The results indicate that the alignment of Listening anchor items is satisfactory (see Figure 4, r= 0.83; r squared = 0.69). This result suggests that the listening anchor item performances are comparable in terms of relative difficulty between the two test populations. (Note: Item Teens_L_A201_V1Q6 (3522P4689) appeared in both Version 1 and Version 3. They are treated as two separate items in the analysis, coded as LIS3522P4689v1 and LIS3522P4689v3.)

However, as can be been seen from the anchor item difficulty, all five anchor items show much higher difficulty values compared to the item difficulty values from Aptis General; this suggests that for the Aptis for Teens pilot test-taker sample, the listening items, as indicated by the five anchor items, are more difficult than for the Aptis General test-taker population.

Table 5: Comparing Teens to General: Anchor item performance

	From this analysis	**From Aptis General**	**Difference**
3522P4050	2.47	0.84	1.63
3522P4053	2.25	0.57	1.68
3522P4043	0.57	-0.68	1.25
3522P4052	2.04	0.71	1.33
3522P4042	0.99	0.49	0.50
3522P4051	2.24	1.10	1.14

Figure 4: Listening anchor item difficulty comparison

Listening Anchor item comparison

y = 0.6644x - 0.665
R² = 0.7051
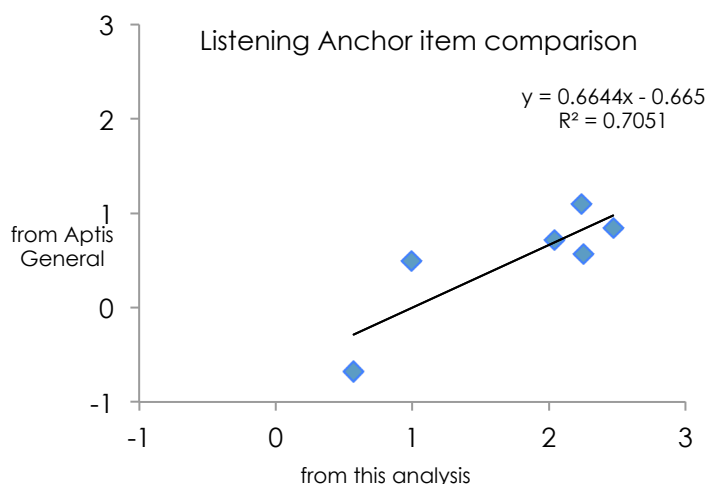
Table 6: Comparing four Listening versions

Version comparison (with anchors)	Avg Pt-biserial	Avg scr-item level	Avg prop corr	Reliability	SEM	Avg scr-TT level	SD-TT level	Max	Min	TT number
V1	0.47	0.79	0.78	0.87	1.72	23.98	4.81	32	2	125
V2	0.39	0.76	0.72	0.76	2.54	21.10	5.24	32	8	126
V3	0.43	0.90	0.89	0.82	1.98	25.65	4.62	32	8	214
V4	0.39	0.75	0.74	0.78	2.31	20.98	4.93	31	5	133
									total	598

Table 6 shows the CTT results comparing the four versions of listening from 598 test-takers. Test-taker numbers vary across different versions (from 125 for Version 1 to 214 for Version 3).

As can be seen, Version 1 and Version 3 have average point-biserial correlations of 0.47 and 0.43 respectively. The reliability estimates of the two versions are 0.87 and 0.82. Version 2 and Version 4 have lower overall average point-biserial correlations, and lower reliability estimates. In terms of the Standard Error of Measurement (SEM), Version 1 and Version 3 have a SEM of less than two, Version 2 and Version 4 have a SEM higher than two.

Table 7 shows the average difficulty of the Listening component from the four trialled versions. Versions 1, 2 and 4 have average difficulty of below minus one, while Version 3 has a relatively higher average difficulty (-0.88). This result is consistent with the results from the CTT results table indicated by average p-values.

Table 7: Average item difficutly – Listening trial versions

Version summary	V1	V2	V3	V4
Mean difficulty	-1.68	-1.25	-0.88	-1.13
Max	1.46	0.69	8.55	3.37
Min	-5.46	-4.51	-3.69	-3.59
SD	2.12	1.57	2.51	1.81

Table 8 summarizes the output from the concurrent analysis of the Listening item analysis with the anchor items included. The table has the anchor items listed at the beginning, followed by items that appeared in different versions. The column 'Displace' shows how anchor values are fitted in this new analysis. The values are all reasonably small, indicating a relatively good fit, supporting the findings shown in the comparison above.

As suggested by both infit and outfit indices, no item has higher than the threshold misfit values (>1.5). The overall alignment between the intended CEFR levels and their actual difficulty, as shown in the item map in Figure 5, is satisfactory. There are a few exceptions, for example, item A2-P4674 seems to be an anomaly and needs to be content reviewed. In general, there is a reasonable progression from A1 items at the bottom to A2, B1 and B2 levels. At the top of the map, some B1 items seems to be mixed with B2 items, but the overall pattern indicates that items performed as expected with this group of pilot participants.

Table 8: Listening item concurrent analysis tasks measurement report

ENTRY	VERSION	Item label	MEASURE	P-value	STATUS	COUNT	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.ZSTD	DISPLACE
8	ALL	An-P4051	1.10	0.45	2	598	1.12	2.93	1.28	3.66	-0.12
1	ALL	An-P4050	0.84	0.41	2	598	1.11	2.90	1.28	3.86	0.36
4	ALL	An-P4052	0.71	0.49	2	598	1.20	4.86	1.41	5.34	0.07
2	ALL	An-P4053	0.57	0.45	2	598	0.99	-0.37	1.01	0.20	0.42
5	ALL	An-P4042	0.49	0.68	2	598	1.05	1.33	1.11	1.47	-0.76
3	ALL	An-P4043	-0.68	0.75	2	598	0.77	-4.76	0.64	-3.69	-0.01
7	ALL	An-P4049	-1.94	0.89	1	598	0.86	-1.52	0.61	-2.01	
6	ALL	An-P4041	-3.04	0.95	1	598	0.86	-0.83	0.51	-1.66	
27	V1	B1-P4739	1.46	0.38	1	125	0.84	-2.12	0.76	-1.40	
29	V1	B2-P4762	1.36	0.81	1	125	1.07	0.64	1.07	0.42	
26	V1	B1-P4740	1.21	0.42	1	125	0.92	-1.04	0.89	-0.61	
28	V1	B2-P4766	0.87	0.98	1	125	1.20	1.60	1.24	1.56	
22	V1	B1-P4744	0.69	0.53	1	125	0.81	-2.79	0.72	-1.69	
30	V1	B2-P4759	0.57	1.10	1	125	0.83	-1.61	0.86	-0.79	
24	V1	B1-P4742	0.37	0.59	1	125	0.88	-1.52	0.80	-1.01	
25	V1	B1-P4741	-0.61	0.76	1	125	1.10	0.80	1.15	0.69	
23	V1	B1-P4743	-1.03	0.82	1	125	0.86	-0.88	0.62	-1.42	
18	V1	A2-P4684	-1.98	0.90	1	125	0.96	-0.08	0.88	-0.10	
21	V1	B1-P4746	-2.24	0.92	1	125	1.03	0.20	0.87	-0.08	
16	V1	A2-P4687	-2.24	0.92	1	125	0.87	-0.40	0.39	-1.36	
20	V1	A2-P4682	-2.39	0.93	1	125	0.81	-0.56	0.37	-1.30	
15	V1	A2-P4688	-2.73	0.94	1	125	1.01	0.16	0.63	-0.41	
19	V1	A2-P4683	-2.73	0.94	1	125	0.71	-0.79	0.27	-1.36	
17	V1	A2-P4685	-3.20	0.96	1	125	1.10	0.37	0.94	0.19	
9	V1	A1-P4661	-3.20	0.96	1	125	1.31	0.78	1.21	0.51	
13	V1	A1-P4652	-3.20	0.96	1	125	0.65	-0.78	0.20	-1.27	
14	V1	A2-P4689	-3.51	0.97	1	125	0.65	-0.65	0.14	-1.32	
11	V1	A1-P4657	-4.50	0.98	1	125	0.49	-0.67	0.04	-1.43	
12	V1	A1-P4655	-4.50	0.98	1	125	0.49	-0.67	0.04	-1.43	
10	V1	A1-P4660	-5.46	0.99	1	125	1.37	0.67	0.07	-1.25	
48	V2	B1-P4733	0.69	0.38	1	126	0.95	-0.66	0.96	-0.27	
46	V2	B1-P4735	0.53	0.41	1	126	1.05	0.67	1.04	0.41	
51	V2	B2-P4765	0.32	0.91	1	126	1.21	1.90	1.23	1.86	
45	V2	B1-P4736	0.25	0.47	1	126	1.16	2.21	1.28	2.31	
44	V2	B1-P4737	0.22	0.48	1	126	1.48	6.00	1.61	4.63	
50	V2	B2-P4767	0.16	0.98	1	126	0.96	-0.36	1.05	0.47	
52	V2	B2-P4763	-0.28	1.15	1	126	0.87	-1.24	0.92	-0.66	
43	V2	B1-P4738	-0.37	0.60	1	126	1.30	3.62	1.37	2.64	
47	V2	B1-P4734	-0.78	0.67	1	126	0.79	-2.54	0.67	-2.29	
36	V2	A2-P4681	-0.78	0.67	1	126	0.91	-1.00	0.82	-1.13	
42	V2	A2-P4675	-0.82	0.68	1	126	0.78	-2.56	0.67	-2.17	
33	V2	A1-P4656	-0.95	0.71	1	126	1.39	3.58	1.55	2.69	
39	V2	A2-P4678	-1.05	0.72	1	126	0.84	-1.60	0.72	-1.59	
49	V2	B1-P4732	-1.09	0.73	1	126	0.84	-1.59	0.68	-1.79	
40	V2	A2-P4677	-1.68	0.82	1	126	0.91	-0.60	0.69	-1.16	
38	V2	A2-P4679	-1.87	0.84	1	126	0.83	-1.09	0.67	-1.11	
34	V2	A1-P4654	-1.87	0.84	1	126	0.79	-1.34	0.61	-1.35	
41	V2	A2-P4676	-1.94	0.85	1	126	0.87	-0.74	0.60	-1.35	
35	V2	A1-P4653	-3.33	0.95	1	126	0.94	-0.06	0.80	-0.15	
32	V2	A1-P4658	-3.77	0.97	1	126	0.93	-0.01	0.42	-0.83	
37	V2	A2-P4680	-4.51	0.98	1	126	0.95	0.15	0.32	-0.70	
31	V2	A1-P4659	-4.51	0.98	1	126	0.87	0.02	0.16	-1.15	
59	V3	A2-P4674	8.55	0.00	0	214	1.00	0.00	1.00	0.00	
73	V3	B2-P4768	1.11	1.08	1	214	1.39	4.01	1.41	4.16	
72	V3	B2-P4764	1.00	1.15	1	214	1.11	1.23	1.15	1.48	
64	V3	A2-P4666	0.93	0.59	1	214	0.96	-0.52	0.92	-0.77	
69	V3	B1-P4728	0.04	0.74	1	214	1.13	1.40	1.02	0.17	
74	V3	B2-P4769	-0.12	1.53	1	214	1.03	0.30	1.09	0.66	
68	V3	B1-P4729	-0.40	0.80	1	214	0.95	-0.41	0.92	-0.32	
66	V3	B1-P4731	-0.63	0.83	1	214	1.17	1.43	1.13	0.59	
71	V3	B1-P4726	-0.99	0.86	1	214	1.02	0.20	0.92	-0.19	
60	V3	A2-P4673	-1.04	0.87	1	214	1.13	0.90	1.13	0.51	
61	V3	A2-P4672	-1.49	0.91	1	214	0.91	-0.46	0.61	-1.05	
67	V3	B1-P4730	-1.56	0.91	1	214	0.75	-1.44	0.36	-2.07	
53	V3	A1-P4651	-1.56	0.91	1	214	0.95	-0.21	0.80	-0.41	
65	V3	B1-P4745	-1.63	0.92	1	214	0.85	-0.77	0.39	-1.81	

70	V3	B1-P4727	-1.78	0.93	1	214	0.78	-1.11	0.33	-1.95	
63	V3	A2-P4670	-2.35	0.95	1	214	0.97	0.00	0.78	-0.22	
54	V3	A1-P4650	-2.47	0.96	1	214	0.92	-0.21	0.93	0.07	
58	V3	A2-P4689	-2.76	0.97	1	214	0.97	0.03	0.92	0.09	
57	V3	A1-P4647	-2.76	0.97	1	214	0.79	-0.57	0.25	-1.50	
62	V3	A2-P4671	-2.93	0.97	1	214	0.90	-0.15	0.27	-1.26	
55	V3	A1-P4649	-2.93	0.97	1	214	0.87	-0.27	0.37	-0.97	
56	V3	A1-P4648	-3.69	0.99	1	214	0.79	-0.24	0.13	-1.61	
89	V4	B1-P4723	3.37	0.06	1	133	1.06	0.28	7.56	5.56	
92	V4	B1-P4720	1.26	0.29	1	133	1.11	1.16	1.94	4.27	
96	V4	B2-P4758	0.85	0.75	1	133	1.31	2.65	1.39	2.88	
94	V4	B2-P4761	0.60	0.86	1	133	1.36	3.08	1.52	4.06	
95	V4	B2-P4760	0.35	0.94	1	133	0.95	-0.43	0.97	-0.24	
93	V4	B1-P4719	0.29	0.48	1	133	0.97	-0.37	0.99	-0.01	
86	V4	A2-P4662	-0.01	0.54	1	133	1.14	1.83	1.16	1.43	
87	V4	B1-P4725	-0.08	0.56	1	133	1.13	1.72	1.10	0.87	
91	V4	B1-P4721	-0.97	0.72	1	133	0.72	-2.91	0.57	-2.93	
90	V4	B1-P4722	-1.01	0.73	1	133	1.04	0.40	1.02	0.17	
82	V4	A2-P4667	-1.11	0.74	1	133	0.79	-1.96	0.63	-2.25	
88	V4	B1-P4724	-1.36	0.78	1	133	1.04	0.36	0.87	-0.56	
80	V4	A2-P4669	-1.52	0.80	1	133	0.88	-0.84	0.76	-1.01	
81	V4	A2-P4668	-1.83	0.84	1	133	0.86	-0.84	0.80	-0.64	
84	V4	A2-P4664	-2.37	0.89	1	133	0.76	-1.15	0.49	-1.52	
83	V4	A2-P4665	-2.46	0.90	1	133	0.94	-0.20	0.74	-0.58	
85	V4	A2-P4663	-2.67	0.92	1	133	0.74	-1.08	0.37	-1.70	
75	V4	A1-P4646	-2.91	0.93	1	133	0.94	-0.13	0.74	-0.39	
76	V4	A1-P4645	-2.91	0.93	1	133	0.92	-0.19	1.01	0.18	
77	V4	A1-P4644	-3.21	0.95	1	133	0.93	-0.12	0.83	-0.12	
78	V4	A1-P4643	-3.59	0.96	1	133	0.94	-0.01	0.32	-1.12	
79	V4	A1-P4642	-3.59	0.96	1	133	0.86	-0.23	0.39	-0.91	

Figure 5: Listening item concurrent analysis: The item map

```
INPUT: 598 Person  96 Item  REPORTED: 598 Person  96 Item  38 CATS
--------------------------------------------------------------------------------

MEASURE    Person - MAP - Item
               <more>|<rare>
    4             .  +  A2
                  .  |
                     |
               .###  |
                  . T|  B1
                  .  |
    3             #  +
                     |
              .#######  |
                 .## |
                     |
            .######### |T
    2                S+
             ######### |
                  .  |
             ######### |  B1
                     |  B1  B2
          ###########  |  An  B1  B2
    1  .###########  +  A2  B2
             .#### |  An  B2  B2
             .#### M|  An  B1  B1  B2
       .########### |S An  An  B1  B2
          #########  |  B1  B1  B1  B2  B2
             .#### |  B1  B2
    0      .###### +  A2  B1  B1
             .### |  B2
             .#### |  B1  B1  B2
          .####### S|
             ###### |  An  B1  B1
             .#### |  A2  A2  B1
   -1         .### +  A1  A2  A2  B1  B1  B1  B1
              .# |  A2  B1
               # |M B1
               # |  A1  A2  A2  B1
               # |  A2  B1
              .# T|  A1  A2  A2  B1
   -2             +  A2  A2  An
               # |  A2  B1
               . |  A2  A2  A2
               . |  A1  A2
                 |  A2  A2  A2
                 |  A1  A1  A1  A2
   -3           +S A1  A2  An
                 |  A1  A1  A1  A2
               . |  A1
                 |  A2
                 |  A1  A1  A1
                 |  A1
   -4            +
                 |
                 |
                 |  A1  A1  A1  A2
                 |T
                 |
   -5            +
                 |
               . |
                 |  A1
                 |
                 |
   -6            +
               <less>|<frequent>

 EACH "#" IS 4: EACH "." IS 1 TO 3
```
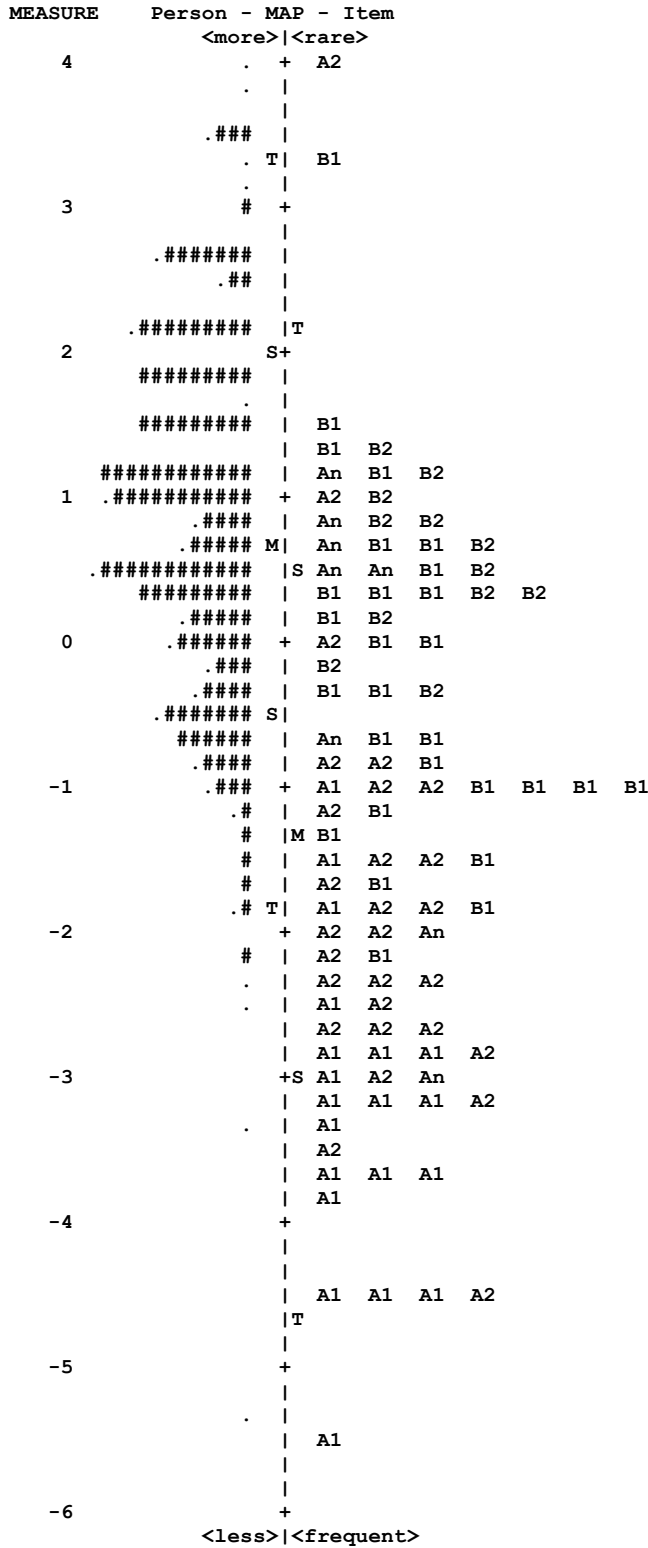
3.1.5 Reading

This section reports the results from the analyses of the Reading data. Table 9 shows the results comparing the four versions of reading from 597 test-takers. As can be seen, Versions 1, 2 and 3 have average point-biserial correlations of higher than 0.70. The reliability coefficients of the three versions are also all higher than 0.70. Version 4, however, has a lower average point-biserial correlation (0.62) than other versions. An overall point-biserial correlation of 0.62 is satisfactory, but the section reliability of 0.58 is alarmingly low. All four versions have similar SEMs, ranging from 3.15 for Version 2 to 3.68 for Version 1.

Table 9: Comparing four Reading versions

Version comparison (with anchors)	Avg Pt-biserial	Avg scr-item level	Reliability	SEM	Avg scr-TT level	SD TT level	Max	Min	TT number
V1	0.75	4.19	0.739	3.68	20.96	7.20	33	2	124
V2	0.75	2.92	0.773	3.15	14.40	6.62	30	1	126
V3	0.71	4.33	0.737	3.56	22.28	6.94	33	3	214
V4	0.62	3.20	0.576	3.63	15.70	5.57	28	1	133
								total	**597**

There is only one reading anchor item. The logit values from Aptis General and Aptis for Teens are 0.04 and 0.72 respectively. Table 10 shows the comparison between the logit values from the unanchored and anchored analyses. The correlation is close to 1.00. The consistently higher measure from the unanchored analysis indicates that the Reading items are more difficult for the Aptis for Teens pilot sample than for the Aptis General. This result is in agreement with the results from the listening component. Appendix B shows the item difficulty measure and the fit indices from the anchored analysis of the Reading items. Two items show out-of-threshold fit indices (> 1.5).

Table 10: Unanchored and anchored analyses comparison

ENTRY	MEASURE (unanchored)	MEASURE (anchored)
1	0.72	-0.04
2	-1.56	-2.32
3	-0.42	-1.18
4	0.14	-0.62
5	1.38	0.62
6	-2.41	-3.17
7	0.78	0.03
8	-0.11	-0.87
9	0.82	0.07
10	-0.80	-1.55
11	0.22	-0.54
12	0.17	-0.59
13	1.64	0.88
14	-2.06	-2.81
15	-0.55	-1.30
16	0.31	-0.45
17	1.74	0.98

Table 11 shows the average difficulty of the reading part from the four trialled versions. Versions 1, 2 and 4 have similar average difficulty, while Version 3 has relatively higher average difficulty (-0.45). This result, however, is not consistent with the results from the CTT results table, indicated by average scores at the item level and needs to be looked into further.

Table 11: Average item difficutly – Reading trial versions

Version summary	V1	V2	V3	V4
Mean difficulty	-0.87	-0.99	-0.45	-0.89
Max	0.62	0.07	0.88	0.98
Min	-2.32	-3.17	-1.55	-2.81
SD	1.22	1.52	1.00	1.59

Table 12: Reading item concurrent analysis tasks measurement report

ENTRY	NAME	Version	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.ZSTD	DISPLACE	PBSX
1	Anch_3642	ALL	-0.04	2	597	2302	0.0326	0.9507	-0.839	0.8995	-1.6791	0	0.7164
5	B2_V13795	V1	0.624	1	124	359	0.0851	0.9316	-0.5091	0.9745	-0.159	0	0.6468
4	B1_V13794	V1	-0.6204	1	124	536	0.0784	0.9105	-0.6091	1.0225	0.201	0	0.688
3	A2_V13793	V1	-1.1763	1	124	588	0.0771	0.8179	-1.1092	0.6275	-0.1894	0	0.621
2	A1_V13792	V1	-2.3161	1	124	596	0.1714	0.4454	-1.4796	0.2097	-1.4998	0	0.4037
9	B2_V23796	V2	0.0653	1	126	277	0.0778	0.8965	-0.7491	1.0152	0.161	0	0.6426
7	A2_V23798	V2	0.0283	1	126	222	0.0821	1.1949	1.4012	1.1326	0.8511	0	0.5439
8	B1_V23797	V2	-0.8661	1	126	418	0.0777	0.9443	-0.4091	0.9169	-0.6291	0	0.6699
6	A1_V23799	V2	-3.1684	1	126	557	0.13	0.6353	-2.3094	0.4518	-2.0995	0	0.5781
13	B2_V33800	V3	0.8812	1	214	658	0.0591	0.9173	-0.8391	0.9139	-0.8591	0	0.6055
11	A2_V33802	V3	-0.5352	1	214	976	0.0595	1.6843	4.9717	3.2006	2.6532	0	0.4501
12	B1_V33801	V3	-0.5891	1	214	1105	0.0592	0.859	-1.3491	0.8363	-1.2392	0	0.7048
10	A1_V33803	V3	-1.5539	1	214	971	0.1135	0.8979	-0.6591	1.212	1.2112	0	0.5018
17	B2_V43804	V4	0.9817	1	133	98	0.1254	1.2673	1.7913	1.2903	1.8413	0	0.2146
16	B1_V43805	V4	-0.4453	1	133	417	0.0728	0.9008	-0.8191	0.913	-0.6991	0	0.5428
15	A2_V43806	V4	-1.3009	1	133	565	0.0615	0.6803	-2.2893	0.7989	-0.1992	0	0.538
14	A1_V43807	V4	-2.8142	1	133	624	0.1393	0.9858	0.041	0.488	-1.2595	0	0.4265

3.2   Section II: Speaking and Writing

The analyses of the Speaking and Writing components were conducted using FACETS. In contrast to the Grammar & Vocabulary and Listening and Reading components of the test, items in the Speaking and Writing components were all specifically written for the target Aptis for Teens test population. Different numbers of raters were assigned to the items. Therefore, in addition to obtaining test item difficulty parameters, one of the purposes of the analysis was to evaluate raters' rating behaviour. Rasch analysis was performed to generate the Speaking and Writing item difficulty values and quality control measures, including infit and outfit indices (see Appendix D & E).

3.2.1   Speaking

Five analyses were carried out, including four separate analyses using data from four trialled versions and one concurrent analysis combining the data from four versions. Tables 13 to 16 show the tasks measurement report for each version, and Table 17 shows the tasks measurement report from the concurrent analysis. Results indicate that all tasks show sufficient fit to be considered for selection in operational tests, and the analyses demonstrate that, in terms of consistency, the tasks are performing satisfactorily.

Table 13: Speaking Version 1 – tasks measurement report

Total Score	Total Count	Obsvd Average	Fair(M) Average	Model Measure	S.E.	Infit MnSq	ZStd	Outfit MnSq	ZStd	Estim. Discrm	Correlation PtMea	PtExp	N tasks
1288	347	3.71	4.24	−1.19	.07	.85	−1.7	.89	−1.2	1.12	.84	.82	1 S_V1_T1
463	142	3.26	3.65	−.11	.11	1.08	.6	1.10	.7	.89	.78	.80	2 S_V1_T2
434	146	2.97	3.25	.19	.10	.99	.0	.97	−.2	.99	.81	.81	3 S_V1_T3
272	143	1.90	2.08	1.11	.10	1.04	.3	1.15	1.0	.93	.77	.78	4 S_V1_T4
614.3	194.5	2.96	3.31	.00	.10	.99	−.2	1.03	.1		.80		Mean(Count:4)
395.7	88.1	.67	.79	.82	.01	.09	.9	.10	.9		.03		S.D.(Populn.)
457.0	101.7	.77	.91	.95	.02	.10	1.1	.12	1.0		.03		S.D.(Sample)

```
Model, Populn: RMSE .10  Adj (True) S.D. .81  Separation 8.17  Strata 11.22  Reliability .99
Model, Sample: RMSE .10  Adj (True) S.D. .94  Separation 9.45  Strata 12.93  Reliability .99
Model, Fixed (all same) chi-square:  346.0  d.f.: 3  significance (probability): .00
Model,  Random (normal) chi-square:  3.0  d.f.: 2  significance (probability): .22
```

Table 14: Speaking Version 2 – tasks measurement report

Total Score	Total Count	Obsvd Average	Fair(M) Average	Model Measure	S.E.	Infit MnSq	ZStd	Outfit MnSq	ZStd	Estim. Discrm	Correlation PtMea	PtExp	N tasks
1288	347	3.71	3.85	−1.25	.09	1.00	.0	1.03	.3	.99	.88	.86	1 S_V1_T1
218	60	3.63	3.62	.05	.18	.78	−1.2	.73	−1.4	1.31	.78	.73	5 S_V2_T2
180	54	3.33	3.54	.01	.18	.89	−.4	.90	−.3	1.13	.77	.74	6 S_V2_T3
135	55	2.45	2.11	1.19	.20	1.42	1.8	1.33	1.3	.75	.63	.73	7 S_V2_T4
455.3	129.0	3.28	3.28	.00	.16	1.02	.0	1.00	.0		.76		Mean(Count:4)
481.7	125.9	.50	.68	.86	.04	.24	1.1	.22	1.0		.09		S.D.(Populn.)
556.2	145.4	.58	.79	1.00	.05	.28	1.3	.25	1.2		.10		S.D.(Sample)

```
Model, Populn: RMSE .17  Adj (True) S.D. .85  Separation 5.02  Strata 7.03  Reliability .96
Model, Sample: RMSE .17  Adj (True) S.D. .98  Separation 5.83  Strata 8.10  Reliability .97
Model, Fixed (all same) chi-square:  159.7  d.f.: 3  significance (probability): .00
Model,  Random (normal) chi-square:  2.9  d.f.: 2  significance (probability): .23
```

Table 15: Speaking Version 3 – tasks measurement report

```
+-----------------------------------------------------------------------------------------+
| Total    Total   Obsvd   Fair(M)|        Model | Infit      Outfit     |Estim.| Correlation |
|
| Score    Count   Average Average|Measure  S.E. | MnSq ZStd  MnSq ZStd  |Discrm| PtMea PtExp | Nu tasks
|
|-----------------------+-------------+--------------------+------+------------+-------------------|
| 1288      347    3.71   3.91 | -2.49   .09 | 1.01   .1  1.06   .5 |  .98 |  .88   .87 |  1 S_V1_T1
|
|  339      104    3.26   2.58 |   .03   .14 |  .65 -2.7   .63 -2.7 | 1.32 |  .89   .84 |  8 S_V3_T2
|
|  327      105    3.11   2.40 |   .54   .14 |  .98   .0   .88  -.7 | 1.10 |  .87   .86 |  9 S_V3_T3
|
|  234      102    2.29   1.71 |  1.92   .14 | 1.32  2.0  1.38  2.1 |  .66 |  .82   .87 | 10 S_V3_T4
|
|-----------------------+-------------+--------------------+------+------------+-------------------|
|  547.0   164.5   3.09   2.65 |   .00   .13 |  .99  -.2   .99  -.2 |      |  .87       | Mean(Count:4)
|
|  429.7   105.4    .51    .79 |  1.59   .02 |  .24  1.7   .27  1.8 |      |  .03       | S.D.(Populn.)
|
|  496.2   121.7    .59    .92 |  1.84   .02 |  .28  2.0   .31  2.1 |      |  .03       | S.D. (Sample)
|
+-----------------------------------------------------------------------------------------+
Model, Populn: RMSE .13  Adj (True) S.D. 1.59  Separation 12.33  Strata 16.77  Reliability .99
Model, Sample: RMSE .13  Adj (True) S.D. 1.83  Separation 14.24  Strata 19.32  Reliability 1.00
Model, Fixed (all same) chi-square:  847.8  d.f.: 3  significance (probability): .00
Model,  Random (normal) chi-square:  3.0  d.f.: 2  significance (probability): .22
-----------------------------------------------------------------------------------------
```

Table 16: Speaking Version 4 – tasks measurement report

```
+-------------------------------------------------------------------------------------------+
|Total Total  Obsvd   Fair(M)|        Model| Infit      Outfit     |Estim.|Correlation|Exact Agree|
|
|Score Count  Average Average|Measure  S.E. | MnSq ZStd  MnSq ZStd|Discrm|PtMea PtExp| Obs% Exp% | N raters
|
|---------+-------------+--------------------+------+------------+-------------+-------------------|
| 497  126   3.94   2.47 |   .08   .16 |  .52 -3.4   .54 -3.2 | 1.43 |  .93 .85 | 45.8 48.4 | 1 rater1
|
| 436  177   2.46   2.86 |  -.39   .10 |  .87 -1.0   .84  -.9 | 1.16 |  .88 .87 | 36.5 42.6 | 2 rater2
|
| 519  168   3.09   3.88 | -1.56   .10 | 1.08   .7  1.27  1.7 |  .68 |  .83 .85 | 40.0 42.0 | 3 rater3
|
| 147   45   3.27   3.64 | -1.23   .19 | 1.15   .6  1.10   .4 |  .73 |  .81 .84 | 41.7 46.3 | 4 rater4
|
|---------+-------------+--------------------+------+------------+-------------+-------------------|
| 399.8 129.0 3.19   3.21 |  -.77   .14 |  .91  -.8   .93  -.5 |      |  .86     | Mean(Count:4)
|
| 149.1 52.2   .53    .57 |   .65   .04 |  .25  1.7   .28  1.9 |      |  .05     | S.D.(Populn)
|
| 172.1 60.2   .61    .66 |   .76   .05 |  .28  1.9   .32  2.1 |      |  .05     | S.D.(Sample)
|
+-------------------------------------------------------------------------------------------+
Model, Populn: RMSE .14  Adj (True) S.D. .64 Separation 4.46 Strata 6.28 Reliability (not inter-rater) .95
Model, Sample: RMSE .14  Adj (True) S.D. .74 Separation 5.18 Strata 7.24 Reliability (not inter-rater) .96
Model, Fixed (all same) chi-square:  109.4  d.f.: 3  significance (probability): .00
Model,  Random (normal) chi-square:  2.9  d.f.: 2  significance (probability): .23
Inter-Rater agreement opportunities: 364  Exact agreements: 145 = 39.8%  Expected:  159.3 = 43.8%
-------------------------------------------------------------------------------------------
```

Table 17: Speaking concurrent analysis tasks measurement report

```
+----------------------------------------------------------------------------------------------------+
| Total   Total   Obsvd  Fair(M)|        Model | Infit       Outfit      |Estim.| Correlation |          |
| Score   Count   Average Average|Measure  S.E. | MnSq ZStd  MnSq ZStd |Discrm| PtMea PtExp | Nu tasks |
|--------------------------------+--------------+----------------------+------+-------------+----------|
| 1288     347      3.71    4.24 | -1.24    .07 | 1.11  1.1  1.28  2.3 |  .85 |  .76   .78  |  1 S_V1_T1 |
|  463     142      3.26    3.64 |  -.28    .11 | 1.10   .7  1.09   .7 |  .89 |  .77   .80  |  2 S_V1_T2 |
|  434     146      2.97    3.23 |  -.01    .10 |  .95  -.3   .93  -.5 | 1.03 |  .82   .81  |  3 S_V1_T3 |
|  272     143      1.90    2.06 |   .90    .10 | 1.04   .3  1.14   .9 |  .94 |  .77   .78  |  4 S_V1_T4 |
|  218      60      3.63    4.02 |  -.68    .17 |  .80 -1.1   .75 -1.3 | 1.30 |  .75   .70  |  5 S_V2_T2 |
|  180      54      3.33    3.85 |  -.67    .17 |  .84  -.7   .86  -.5 | 1.16 |  .76   .72  |  6 S_V2_T3 |
|  135      55      2.45    2.40 |   .38    .19 | 1.16   .7  1.09   .4 |  .93 |  .67   .71  |  7 S_V2_T4 |
|  339     104      3.26    3.05 |   .12    .13 |  .67 -2.5   .66 -2.5 | 1.29 |  .87   .82  |  8 S_V3_T2 |
|  327     105      3.11    3.01 |   .55    .13 |  .87  -.8   .78 -1.5 | 1.19 |  .87   .84  |  9 S_V3_T3 |
|  234     102      2.29    2.16 |  1.84    .13 | 1.24  1.6  1.30  1.8 |  .73 |  .81   .85  | 10 S_V3_T4 |
|  119      55      2.16    4.24 |  -.69    .14 |  .87  -.6   .90  -.3 | 1.10 |  .79   .78  | 11 S_V4_T2 |
|  106      55      1.93    4.13 |  -.37    .13 |  .52 -2.9   .44 -2.2 | 1.46 |  .82   .75  | 12 S_V4_T3 |
|   86      59      1.46    3.28 |   .14    .14 |  .92  -.3  1.03   .2 |  .96 |  .65   .66  | 13 S_V4_T4 |
+--------------------------------+--------------+----------------------+------+-------------+----------+
```

Task Difficulty Indices: In general, the tasks comply with the intended difficulty (see Figure 6): all Task 4s are more difficult than other tasks, and Task 1 is easier than all other tasks. Tasks 2 and 3 for Versions 1, 2 and 4 cluster together with similar difficulty. This is slightly contrary to expectation, as the revised Task 3 for Speaking eliminated the picture description in the hope of focusing attention on the B1-level 'compare and contrast' elements of the task. Nonetheless, both tasks employ the same basic rating scale which targets a B1-level of performance, so the results are not problematic for the use of these tasks in operational versions.

The tasks variable map (Figure 6) shows that Task 3 for Version 3 is more difficult than all other versions and clusters together with Task 4. The average difficulty for Version 3 is considerably higher than the other versions, with Versions 2 and 4 being the easiest. Content analysis of Task 3 for Version 3 is suggested. Figures 7 to 10 are the tasks variable map for each version. With the exception of Version 2, tasks in all three other versions display the intended task difficulty indices. Tasks 2 and 3 in Version 2 demonstrate comparable task difficulty indices (see Figure 8).

Table 18: Average item difficulty – Speaking trial versions

	V1	V2	V3	V4
Mean	-0.16	-0.55	0.32	-0.54
Max	0.90	0.38	1.84	1.84
Min	-1.24	-1.24	-1.24	-1.24
SD	0.88	0.68	1.27	0.58

Figure 6: All four Speaking Versions – a concurrent analysis tasks variable map

```
+-----------------------------------------------------------------------------------------------------------------------------------------------------+
|Measr|-raters           |+examinees|-tasks                           | S.1 | S.2 | S.3 | S.4 | S.5 | S.6 | S.7 | S.8 | S.9 |S.10 |S.11 |S.12 |S.13 |
|-----+-----------------+----------+---------------------------------+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----|
|  5 +                  + *.      +                                 + (5) + (5) + (5) + (4) + (5) + (5) + (5) + (5) + (5) + (5) + (5) + (5) + (5) |
|    |                  | .       |                                 |     |     |     |     |     |     |     |     |     |     |     |     |     |
|    |                  | *       |                                 |     |     |     |     |     |     |     |     |     |     |     |     |     |
|  4 +                  +         +                                 +     +     +     +     +     +     +     +     +     +     +     +     +     +
|    |                  | **      |                                 |     |     |     |     |     | --- |     |     |     | --- |     |     |     |
|    |                  | .       |                                 |     | --- |     |     |     |     | --- | --- | --- |     |     |     |     |
|    |                  |         |                                 |     |     | --- |     |     |     |     |     |     |     |     |     |     |
|  3 +                  +         +                                 +     +     +     +     +     +     +     +     +     +     +     +     +     +
|    |                  | ***     |                                 | --- |     |     |     |     |     |     |     |     |     |     |     |     |
|    |                  | *       |                                 |     |     |     |     | --- |     |   4 |     |     |   4 |     |     |     |
|    |                  | *.      |                                 |     |     |     | --- |     |     |     |   4 |     |     |     |     | --- |
|  2 +                  + *******. +                                +     +   4 +   4 +     +     +   4 +     +     +     +     + --- +     +     +
|    |                  | *       | S_V3_T4                         |     |     |     |     |     |     |     | --- |     |   4 |     | --- |     |
|    |                  | *******  |                                |   4 |     |     |     |   4 |     |     |     |     | --- |     |     |     |
|    |                  | **      |                                 |     |     | --- |     |     |     |   3 | --- |     |     |   4 |     |   4 |
|  1 +                  + *******. + S_V1_T4                        +     +     +     +   3 +     +     +     +     +     +     +     +   4 +     +
|    |                  | ***     |                                 | --- | --- |     |     | --- | --- |     |   3 | --- |     | --- |     | --- |
|    |                  | **.     | S_V2_T4  S_V3_T3                | --- |     |   3 | --- |     |     | --- |     |     |   3 |   3 | --- |   3 |
|    |                  | ****.   | S_V4_T4                         |   3 |     |     |     |     |   3 |     |     |   3 |     |     |   3 | --- |
|  * 0 * rater1         * ****    * S_V1_T3  S_V3_T2                * *   *   3 * --- *     *   3 *     *     * --- *     * --- * --- *     *     *
|    |                  | *****   | S_V1_T2  S_V4_T3                | --- |     |     |   2 |     | --- |     |     | --- |     |   2 |   2 |   2 |
|    |                  | *****.  |                                 |   2 | --- |   2 |     |     |     |   2 |     | --- |     |     |     |     |
|    | rater2           | **.     | S_V2_T2  S_V2_T3  S_V4_T2       |     |     |     | --- | --- |   2 |     |     |   2 |     | --- | --- | --- |
| -1 +                  + ****    +                                 + --- +   2 +     +     +     +     +   2 +     +     +     +     +   1 +     +
|    | rater3  rater4   | ***     | S_V1_T1                         |     | --- | --- |   1 |     |     |     |     | --- |   2 |   1 |     |     |
|    |                  | ***     |                                 |   1 |     |     |     |   2 | --- |     |     |     |     |     |     |   1 |
|    |                  | ****    |                                 |     |   1 |     |     |     |     |     | --- |     | --- |     | --- |     |
| -2 +                  + ***     +                                 +     +     +   1 + --- +     +   1 + --- +     +   1 +     + --- +     +     +
|    |                  | *       |                                 |     |     |     |     |     |     |     |     |     |     |     |     |     |
|    |                  | ***     |                                 | --- | --- |     |     | --- |     |     |   1 |     |   1 |     |     | --- |
|    |                  | *.      |                                 |     |     |     |     |     | --- |     |     | --- |     |     |     |     |
| -3 +                  + ***.    +                                 +     +     +     +     +     +   1 + --- +     +     +     +     +     +     +
|    |                  |         |                                 |     |     | --- |     |     |     |     |     |     | --- |     |     |     |
|    |                  |         |                                 |     |     |     |     |     |     |     |     |     |     |     |     |     |
|    |                  | .       |                                 |     |     |     |     |     |     |     |     |     |     |     |     |     |
| -4 +                  + .       +                                 +     +     +     +     +     +     + --- +     +     +     +     +     +     +
|    |                  | *       |                                 |     |     |     |     |     |     |     |     |     |     |     |     |     |
|    |                  |         |                                 |     |     |     |     |     |     |     |     |     |     |     |     |     |
|    |                  |         |                                 |     |     |     |     |     |     |     |     |     |     |     |     |     |
| -5 +                  + .       +                                 +     +     +     +     +     +     +     +     +     +     +     +     +     +
|    |                  | .       |                                 |     |     |     |     |     |     |     |     |     |     |     |     |     |
|    |                  |         |                                 |     |     |     |     |     |     |     |     |     |     |     |     |     |
|    |                  | .       |                                 |     |     |     |     |     |     |     |     |     |     |     |     |     |
| -6 +                  +         +                                 + (0) + (0) + (0) + (0) + (1) + (0) + (0) + (0) + (0) + (0) + (0) + (0) + (0) |
|-----+-----------------+----------+---------------------------------+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----|
|Measr|-raters           | * = 2    |-tasks                           | S.1 | S.2 | S.3 | S.4 | S.5 | S.6 | S.7 | S.8 | S.9 |S.10 |S.11 |S.12 |S.13 |
+-----------------------------------------------------------------------------------------------------------------------------------------------------+
```

Figure 7: Speaking Version 1 – task variable map

```
+-----------------------------------------------------------+
|Measr|-raters |+examinees|-tasks   | S.1 | S.2 | S.3 | S.4 |
|-----+--------+----------+---------+-----+-----+-----+-----|
|  4 +        + *****.   +         + (5) + (5) + (5) + (4) |
|    |        | **       |         |     |     |     |     |
|    |        |          |         |     | --- |     |     |
|    |        |          |         |     |     | --- |     |
|  3 +        +          +         + --- +     +     +     |
|    |        | **.      |         |     |     |     |     |
|    |        |          |         |     |     |     |     |
|    |        |          |         |     |     |     | --- |
|  2 +        + *******. +         +     + 4   + 4   +     |
|    |        | *.       |         | 4   |     |     |     |
|    |        | *******  |         |     |     |     |     |
|    |        | .        |         |     |     | --- |     |
|  1 +        + *****.   + S_V1_T4 + --- +     +     + 3   |
|    |        | ******** |         |     | --- |     |     |
|    |        | **       |         | 3   |     | 3   | --- |
|    |        | **       | S_V1_T3 |     |     |     |     |
*  0 *        * *****.   * S_V1_T2 * --- * 3   * --- *     *
|    | rater1 | *****    |         |     |     |     | 2   |
|    |        | *****.   |         | 2   | --- | 2   |     |
|    | rater2 | ***      |         |     |     |     | --- |
| -1 +        + *        +         + --- + 2   +     +     |
|    | rater3 | *******  | S_V1_T1 |     | --- | --- | 1   |
|    |        | .        |         |     |     |     |     |
|    |        | *****    |         | 1   | 1   |     |     |
| -2 + rater4 + *        +         +     +     +     + --- |
|    |        | ***      |         |     |     | 1   |     |
|    |        | .        |         |     | --- |     |     |
|    |        | *.       |         |     |     |     |     |
| -3 +        + .        +         + --- +     +     +     |
|    |        | **       |         |     |     | --- |     |
|    |        |          |         |     |     |     |     |
|    |        |          |         |     |     |     |     |
| -4 +        + *        +         +     +     +     +     |
|    |        | .        |         |     |     |     |     |
|    |        |          |         |     |     |     |     |
|    |        |          |         |     |     |     |     |
| -5 +        + .        +         +     +     +     +     |
|    |        |          |         |     |     |     |     |
|    |        |          |         |     |     |     |     |
|    |        |          |         |     |     |     |     |
| -6 +        + .        +         +     +     +     +     |
|    |        |          |         |     |     |     |     |
|    |        |          |         |     |     |     |     |
|    |        |          |         |     |     |     |     |
| -7 +        + *.       +         + (0) + (0) + (0) + (0) |
|-----+--------+----------+---------+-----+-----+-----+-----|
|Measr|-raters | * = 2    |-tasks   | S.1 | S.2 | S.3 | S.4 |
+-----------------------------------------------------------+
```

```
S.1: Model = ?,?,1,R5  ; tasks: S_V1_T1
S.2: Model = ?,?,2,R5  ; tasks: S_V1_T2
S.3: Model = ?,?,3,R5  ; tasks: S_V1_T3
S.4: Model = ?,?,4,R6  ; tasks: S_V1_T4
```

Figure 8: Speaking Version 2 – task variable map

```
+-------------------------------------------------------------------+
|Measr|-raters |+examinees  |-tasks          | S.1 | S.2 | S.3 | S.4 |
|----+-------+----------+---------------+----+----+----+----|
|  4 +       + *********. +               + (5) + (5) + (5) + (5) |
|    |       | .        |               |     |     | --- | --- |
|    |       | .        |               |     |     |     |     |
|  3 +       + .        +               +     +     +     +     |
|    |       | .        |               |  4  | --- |     |  4  |
|    |       | .        |               |     |     |     |     |
|  2 +       + .        +               +     +     +  4  + --- |
|    |       | *.       |               | --- |  4  |     |     |
|    |       | ******.  | S_V2_T4       |     |     |     |  3  |
|  1 +       + .        +               +  3  +     + --- +     |
|    |       | *.       |               |     | --- |     | --- |
|    |       | *.       |               | --- |     |  3  |     |
*   0 * rater1 * *.     * S_V2_T2  S_V2_T3 *     *  3  *     *     *
|    |       | *.       |               |  2  |     | --- |     |
|    |       | *.       |               |     | --- |     |  2  |
| -1 + rater2 + .       +               + --- +     +  2  +     |
|    | rater3 | *.      | S_V1_T1       |     |     |     |     |
|    | rater4 |         |               |     |  2  | --- |     |
| -2 +       + *.       +               +     +     +     + --- |
|    |       | .        |               |     |     |  1  |     |
|    |       | .        |               |  1  | --- |     |     |
| -3 +       + .        +               +     +     + --- +     |
|    |       | .        |               |     |     |     |  1  |
|    |       | .        |               |     |     |     |     |
| -4 +       + .        +               +     +     +     +     |
|    |       |          |               |     |     |     | --- |
|    |       | .        |               | --- |     |     |     |
| -5 +       +          +               +     +     +     +     |
|    |       |          |               |     |     |     |     |
|    |       |          |               |     |     |     |     |
| -6 +       +          +               +     +     +     +     |
|    |       |          |               |     |     |     |     |
|    |       | .        |               |     |     |     |     |
| -7 +       +          +               +     +     +     +     |
|    |       |          |               |     |     |     |     |
|    |       |          |               |     |     |     |     |
| -8 +       + .        +               +     +     +     +     |
|    |       |          |               |     |     |     |     |
|    |       |          |               |     |     |     |     |
| -9 +       + *        +               + (0) + (1) + (0) + (0) |
|----+-------+----------+---------------+----+----+----+----|
|Measr|-raters | * = 5    |-tasks          | S.1 | S.2 | S.3 | S.4 |
+-------------------------------------------------------------------+

S.1: Model = ?,?,1,R5  ; tasks: S_V1_T1
S.2: Model = ?,?,5,R5  ; tasks: S_V2_T2
S.3: Model = ?,?,6,R5  ; tasks: S_V2_T3
S.4: Model = ?,?,7,R6  ; tasks: S_V2_T4
```

Figure 9: Speaking Version 3 – task variable map

```
+-----------------------------------------------------------------------+
|Measr|-raters          |+examinees |-tasks    | S.1 | S.2 | S.3 | S.4 |
|-----+----------------+-----------+---------+-----+-----+-----+-----|
|   6 +                 + ********. +         + (5) + (5) + (5) + (5) |
|     |                 |           |         |     |     |     |     |
|     |                 | .         |         |     |     |     |     |
|   5 +                 + .         +         +     +     +     +     |
|     |                 | .         |         |     |     |     |     |
|     |                 |           |         | --- |     |     |     |
|   4 +                 +           +         +     + --- +     + --- |
|     |                 |           |         |     |     | --- |     |
|     |                 | *         |         |     |     |     |     |
|   3 +                 + .         +         + 4   +     +     +     |
|     |                 | *.        |         |     | 4   |     | 4   |
|     |                 | .         |         |     |     |     |     |
|   2 +                 + *         + S_V3_T4 + --- +     + 4   +     |
|     |                 | **.       |         |     | --- |     | --- |
|     |                 | *.        |         |     |     |     |     |
|   1 +                 + *******.  +         + 3   +     + --- +     |
|     | rater1          | .         | S_V3_T3 | --- | 3   |     | 3   |
|     |                 | .         |         |     |     | 3   |     |
*   0 *                 * *.        * S_V3_T2 *     * --- *     *     *
|     | rater2   rater3 | *         |         | 2   |     | --- | --- |
|     | rater4          | *.        |         |     |     |     |     |
|  -1 +                 + ***       +         +     + 2   + 2   +     |
|     |                 | .         |         | --- |     | --- | 2   |
|     |                 | ***.      |         |     |     |     |     |
|  -2 +                 + .         +         +     + --- +     + --- |
|     |                 | *.        | S_V1_T1 |     |     | 1   |     |
|     |                 | .         |         |     | 1   |     | 1   |
|  -3 +                 + .         +         +     + --- +     |
|     |                 |           |         | 1   | --- |     | --- |
|     |                 |           |         |     |     |     |     |
|  -4 +                 + .         +         +     +     +     +     |
|     |                 | .         |         |     |     |     |     |
|     |                 |           |         |     |     |     |     |
|  -5 +                 + *         +         +     +     +     +     |
|     |                 |           |         |     |     |     |     |
|     |                 | .         |         | --- |     |     |     |
|  -6 +                 + .         +         +     +     +     +     |
|     |                 |           |         |     |     |     |     |
|     |                 |           |         |     |     |     |     |
|  -7 +                 +           +         +     +     +     +     |
|     |                 |           |         |     |     |     |     |
|     |                 | .         |         |     |     |     |     |
|  -8 +                 +           +         +     +     +     +     |
|     |                 |           |         |     |     |     |     |
|     |                 |           |         |     |     |     |     |
|  -9 +                 +           +         +     +     +     +     |
|     |                 | .         |         |     |     |     |     |
|     |                 |           |         |     |     |     |     |
| -10 +                 + *.        +         + (0) + (0) + (0) + (0) |
|-----+----------------+-----------+---------+-----+-----+-----+-----|
|Measr|-raters          | * = 4     |-tasks   | S.1 | S.2 | S.3 | S.4 |
+-----------------------------------------------------------------------+


S.1: Model = ?,?,1,R5  ; tasks: S_V1_T1
S.2: Model = ?,?,8,R5  ; tasks: S_V3_T2
S.3: Model = ?,?,9,R5  ; tasks: S_V3_T3
S.4: Model = ?,?,10,R6 ; tasks: S_V3_T4
```

Figure 10: Speaking Version 4 – task variable map

```
+---------------------------------------------------------+
|Measr|-raters |+examinees |-tasks   | S.1 | S.2 | S.3 | S.4 |
|-----+--------+-----------+---------+-----+-----+-----+-----|
|  4 +         + ********* +         + (5) + (5) + (5) + (5) |
|    |         |           |         | --- |     |     |     |
|    |         |           |         |     |     |     |     |
|    |         |           |         |     |     |     |     |
|    |         |           |         |     |     |     |     |
|  3 +         + .         +         +     +     +     +     |
|    |         | .         |         |     |     |     |     |
|    |         | .         |         |     |     |     | --- |
|    |         | .         |         |  4  | --- | --- |     |
|  2 +         + .         +         +     +     +     +     |
|    |         | *.        |         |     |     |     |  4  |
|    |         | *         |         |     |     |  4  |     |
|    |         | ******.   |         | --- |     |  4  |     |
|  1 +         +           +         +     + --- +     + --- |
|    |         | *         | S_V4_T4 |     |     | --- |     |
|    |         | *         |         |  3  |  3  |     |  3  |
|    |         | *.        | S_V4_T3 |     | --- |  3  | --- |
*  0 *  rater1 * .         *         * --- *     * --- *     *
|    |         | *.        | S_V4_T2 |     |     |  2  |  2  |
|    |  rater2 | ***       |         |     |  2  |     |     |
|    |         | .         |         |  2  |     | --- | --- |
| -1 +         + *         + S_V1_T1 +     + --- +     +     |
|    |  rater4 | *.        |         | --- |     |  1  |     |
|    |  rater3 | .         |         |     |     |     |     |
|    |         | .         |         |     |  1  |     |  1  |
| -2 +         + .         +         +     +     + --- +     |
|    |         | .         |         |  1  |     |     |     |
|    |         |           |         |     | --- |     |     |
|    |         | .         |         |     |     |     |     |
| -3 +         + *         +         +     +     +     + --- |
|    |         | .         |         |     |     |     |     |
|    |         |           |         | --- |     |     |     |
|    |         | .         |         |     |     |     |     |
| -4 +         +           +         +     +     +     +     |
|    |         | .         |         |     |     |     |     |
|    |         | .         |         |     |     |     |     |
|    |         |           |         |     |     |     |     |
| -5 +         +           +         +     +     +     +     |
|    |         |           |         |     |     |     |     |
|    |         | .         |         |     |     |     |     |
|    |         |           |         |     |     |     |     |
| -6 +         + .         +         +     +     +     +     |
|    |         | .         |         |     |     |     |     |
|    |         |           |         |     |     |     |     |
|    |         |           |         |     |     |     |     |
| -7 +         + .         +         + (0) + (0) + (0) + (0) |
|-----+--------+-----------+---------+-----+-----+-----+-----|
|Measr|-raters | * = 5     |-tasks   | S.1 | S.2 | S.3 | S.4 |
+---------------------------------------------------------+

S.1: Model = ?,?,1,R5   ; tasks: S_V1_T1
S.2: Model = ?,?,11,R5  ; tasks: S_V4_T2
S.3: Model = ?,?,12,R5  ; tasks: S_V4_T3
S.4: Model = ?,?,13,R6  ; tasks: S_V4_T4
```

3.2.2 Writing

3.2.2.1 Task fit indices

As with the Speaking data, five analyses were carried out for the Writing data, including four separate analyses using data from four trialled versions and one concurrent analysis combining the data from four versions. Tables 19 to 22 show the tasks measurement report for each version, and Table 23 shows the tasks measurement report from the concurrent analyses. Results indicate that all tasks show sufficient fit to be considered for selection in operational tests and the analyses demonstrate that, in terms of consistency, the tasks are performing satisfactorily.

Table 19: Writing Version 1 task fit indices – measurement report

Total Score	Total Count	Obsvd Average	Fair(M) Average	Model Measure	S.E.	Infit MnSq	ZStd	Outfit MnSq	ZStd	Estim. Discrm	Corr. PtBis	N tasks
200	154	1.30	1.57	2.02	.09	.81	-1.7	.99	.0	1.16	.41	4 W_V1_T4
533	155	3.44	3.94	-.33	.09	.80	-1.6	.88	-.8	1.12	.36	3 W_V1_T3
697	160	4.36	4.66	-1.08	.11	.94	-.3	.84	-.9	1.06	.33	1 W_V1_T1
698	155	4.50	4.64	-1.37	.17	1.19	1.8	1.62	3.8	.63	.09	2 W_V1_T2
532.0	156.0	3.40	3.70	-.19	.12	.93	-.5	1.08	.5		.29	Mean (Count: 4)
203.1	2.3	1.28	1.26	1.33	.03	.16	1.5	.32	2.0		.12	S.D. (Population)
234.5	2.7	1.48	1.46	1.54	.04	.18	1.7	.37	2.3		.14	S.D. (Sample)

```
Model, Populn: RMSE .12  Adj (True) S.D. 1.33  Separation 11.13  Strata 15.17  Reliability .99
Model, Sample: RMSE .12  Adj (True) S.D. 1.53  Separation 12.86  Strata 17.49  Reliability .99
Model, Fixed (all same) chi-square:  647.0  d.f.: 3  significance (probability): .00
Model,  Random (normal) chi-square:  3.0  d.f.: 2  significance (probability): .22
```

Table 20: Writing Version 2 task fit indices – measurement report

Total Score	Total Count	Obsvd Average	Fair(M) Average	Model Measure	S.E.	Infit MnSq	ZStd	Outfit MnSq	ZStd	Estim. Discrm	Corr. PtBis	N tasks
149	50	2.98	3.03	.70	.16	.73	-1.3	.76	-1.1	1.22	.49	8 W_V2_T4
197	50	3.94	4.10	-.15	.18	1.16	.7	1.06	.3	.85	.37	7 W_V2_T3
209	51	4.10	4.21	-.29	.20	1.33	1.2	1.14	.6	.84	.18	5 W_V2_T1
364	75	4.85	4.91	-1.95	.32	.94	-.1	.60	-.6	1.08	.23	6 W_V2_T2
229.8	56.5	3.97	4.06	-.42	.22	1.04	.1	.89	-.2		.32	Mean (Count: 4)
80.7	10.7	.67	.67	.96	.06	.23	1.0	.22	.7		.12	S.D. (Populn.)
93.2	12.3	.77	.78	1.11	.07	.26	1.2	.25	.8		.14	S.D. (Sample)

```
Model, Populn: RMSE .22  Adj (True) S.D. .93  Separation 4.14  Strata 5.86  Reliability .94
Model, Sample: RMSE .22  Adj (True) S.D. 1.08  Separation 4.82  Strata 6.76  Reliability .96
Model, Fixed (all same) chi-square:  58.4  d.f.: 3  significance (probability): .00
Model,  Random (normal) chi-square:  2.8  d.f.: 2  significance (probability): .24
```

Table 21: Writing Version 3 task fit indices – measurement report

```
+---------------------------------------------------------------------------------------+
| Total   Total   Obsvd   Fair(M)|          Model | Infit      Outfit     |Estim.| Corr. |
| Score   Count   Average Average|Measure  S.E. | MnSq ZStd  MnSq ZStd |Discrm| PtBis | Nu tasks
|---------------------------------+---------------+--------------------+------+-------+-------
|   185     93     1.99    1.73 |  1.80   .12 |  .89  -.7   .86  -.8 | 1.14 |   .47 | 12 W_V3_T4
|   361     93     3.88    3.92 |   .47   .16 | 1.14   .9  1.09   .5 |  .88 |   .41 | 11 W_V3_T3
|   303     81     3.74    4.04 |  -.49   .14 | 1.32  1.6  1.36  1.6 |  .67 |   .48 |  9 W_V3_T1
|   475    109     4.36    4.60 | -1.59   .16 |  .79 -1.2   .54 -2.1 | 1.24 |   .54 | 10 W_V3_T2
|---------------+-------------+--------------------+------+-------+--------------------|
|   331.0    94.0   3.49    3.57 |   .05   .14 | 1.04   .1   .96  -.2 |      |   .48 | Mean (Count: 4)
|   104.6     9.9    .90    1.10 |  1.24   .02 |  .21  1.2   .30  1.4 |      |   .05 | S.D. (Population)
|   120.7    11.5   1.04    1.26 |  1.44   .02 |  .24  1.4   .35  1.7 |      |   .05 | S.D. (Sample)
+---------------------------------------------------------------------------------------+
Model, Populn: RMSE .14  Adj (True) S.D. 1.24  Separation 8.53  Strata 11.71  Reliability .99
Model, Sample: RMSE .14  Adj (True) S.D. 1.43  Separation 9.87  Strata 13.50  Reliability .99
Model, Fixed (all same) chi-square:  342.1  d.f.: 3  significance (probability): .00
Model,  Random (normal) chi-square:  3.0  d.f.: 2  significance (probability): .22
---------------------------------------------------------------------------------------
```

Table 22: Writing Version 4 task fit indices – measurement report

```
+---------------------------------------------------------------------------------------+
| Total   Total   Obsvd   Fair(M)|          Model | Infit      Outfit     |Estim.| Corr. |
| Score   Count   Average Average|Measure  S.E. | MnSq ZStd  MnSq ZStd |Discrm| PtBis | Nu tasks
|---------------+-------------+--------------------+------+-------+--------------------|
|   185     93     1.99    1.73 |  1.80   .12 |  .89  -.7   .86  -.8 | 1.14 |   .47 | 12 W_V3_T4
|   361     93     3.88    3.92 |   .47   .16 | 1.14   .9  1.09   .5 |  .88 |   .41 | 11 W_V3_T3
|   303     81     3.74    4.04 |  -.49   .14 | 1.32  1.6  1.36  1.6 |  .67 |   .48 |  9 W_V3_T1
|   475    109     4.36    4.60 | -1.59   .16 |  .79 -1.2   .54 -2.1 | 1.24 |   .54 | 10 W_V3_T2
|---------------+-------------+--------------------+------+-------+--------------------|
|   331.0    94.0   3.49    3.57 |   .05   .14 | 1.04   .1   .96  -.2 |      |   .48 | Mean (Count: 4)
|   104.6     9.9    .90    1.10 |  1.24   .02 |  .21  1.2   .30  1.4 |      |   .05 | S.D. (Population)
|   120.7    11.5   1.04    1.26 |  1.44   .02 |  .24  1.4   .35  1.7 |      |   .05 | S.D. (Sample)
+---------------------------------------------------------------------------------------+
Model, Populn: RMSE .14  Adj (True) S.D. 1.24  Separation 8.53  Strata 11.71  Reliability .99
Model, Sample: RMSE .14  Adj (True) S.D. 1.43  Separation 9.87  Strata 13.50  Reliability .99
Model, Fixed (all same) chi-square:  342.1  d.f.: 3  significance (probability): .00
Model,  Random (normal) chi-square:  3.0  d.f.: 2  significance (probability): .22
---------------------------------------------------------------------------------------
```

Table 23: Writing concurrent analysis tasks measurement report

```
+-----------------------------------------------------------------------------------------+
| Total   Total   Obsvd  Fair(M)|          Model | Infit       Outfit      |Estim.| Corr. |          |
| Score   Count   Average Average|Measure  S.E. | MnSq ZStd  MnSq ZStd |Discrm| PtBis | Nu tasks |
|-------------------------------+--------------+---------------------+------+-------+--------------------|
|  698    155     4.50   4.67 | -1.46   .13 |  .85  -.9  1.76  3.2 |  .86 |  .11 |  2 W_V1_T2 |
|  175     55     3.18   4.21 |  -.31   .13 | 1.66  2.6  1.55  1.9 |  .59 |  .37 | 14 W_V4_T2 |
|  187     60     3.12   4.22 |  -.45   .13 | 1.65  2.9  1.53  2.2 |  .35 |  .32 | 13 W_V4_T1 |
|   66     53     1.25   1.89 |  1.72   .16 | 1.33  1.5  1.15   .6 |  .69 |  .39 | 16 W_V4_T4 |
|  303     81     3.74   4.32 |  -.63   .13 | 1.15   .8  1.22  1.0 |  .69 |  .51 |  9 W_V3_T1 |
|  197     50     3.94   3.90 |  -.15   .18 | 1.12   .5  1.06   .3 |  .85 |  .25 |  7 W_V2_T3 |
|  158     55     2.87   3.81 |  -.02   .14 | 1.08   .4  1.08   .4 |  .91 |  .49 | 15 W_V4_T3 |
|  209     51     4.10   4.12 |  -.30   .17 | 1.06   .3  1.00   .0 |  .93 |  .19 |  5 W_V2_T1 |
|  361     93     3.88   4.20 |  -.75   .13 |  .85  -.8   .97  -.1 |  .98 |  .40 | 11 W_V3_T3 |
|  200    154     1.30   1.35 |  2.24   .09 |  .84 -1.4   .95  -.3 | 1.18 |  .40 |  4 W_V1_T4 |
|  185     93     1.99   2.19 |  1.44   .11 |  .83 -1.2   .80 -1.3 | 1.16 |  .47 | 12 W_V3_T4 |
|  697    160     4.36   4.59 | -1.28   .11 |  .92  -.5   .79 -1.1 | 1.11 |  .32 |  1 W_V1_T1 |
|  533    155     3.44   3.82 |  -.03   .09 |  .78 -1.9   .84 -1.3 | 1.20 |  .36 |  3 W_V1_T3 |
|  149     50     2.98   2.71 |   .92   .15 |  .73 -1.4   .74 -1.4 | 1.38 |  .32 |  8 W_V2_T4 |
|  364     75     4.85   4.87 | -2.49   .33 |  .97   .0   .64  -.6 | 1.08 |  .22 |  6 W_V2_T2 |
|  475    109     4.36   4.66 | -1.44   .14 |  .81  -.9   .61 -2.0 | 1.29 |  .56 | 10 W_V3_T2 |
+-----------------------------------------------------------------------------------------+
```

3.2.2.2   Writing task difficulty indices

The tasks variable map from the concurrent analysis (Figure 11) shows that, except for Task 2 in Version 4, Task 2 is easier than Task 1 in all other versions. Task 3 in Version 3 also appears relatively low in task difficulty. Task 4 is consistently high on the tasks variable map across versions.

Figure 11: All four writing Versions – a concurrent analysis tasks variable map

```
+-----------------------------------------------------------------------------+
|Measr|-raters         |+examinees  |-tasks              | S.1 | S.2 | S.3 | S.4 |
|-----+----------------+------------+--------------------+-----+-----+-----+-----|
|  4 +                 +            +                    + (5) + (5) + (5) + (5) |
|    |                 |            |                    |     |     |     |     |
|    |                 |            |                    |     |     |     |     |
|    |                 |            |                    |     |     |     |     |
|    |                 | **.        |                    |     |     |     |     |
|    |                 |            |                    |     |     |     |     |
|  3 +                 + .          +                    +     +     +     +     |
|    |                 |            |                    |     |     |     |     |
|    |                 |            |                    |     |     |     |     |
|    |                 | .          |                    |     |     | --- | --- |
|    |                 | ***.       |                    |     |     |     |     |
|    |                 |            | W_V1_T4            |     |     |     |     |
|  2 +                 +            +                    + --- + --- +     +     |
|    |                 |            |                    |     |     |     |     |
|    |                 | **         | W_V4_T4            |     |     |     |  4  |
|    |                 | ****       | W_V3_T4            |     |     |     |     |
|    |                 | *          |                    |     |     |  4  |     |
|    |                 | **.        |                    |  4  |     |     |     |
|  1 +                 + ********   + W_V2_T4            +     +  4  +     + --- |
|    |                 | **         |                    |     |     |     |     |
|    |                 | **.        |                    | --- |     | --- |     |
|    |                 | *****      |                    |     |     |     |     |
|    |                 | *          |                    |     | --- |     |  3  |
|    |                 | *          |                    |  3  |     |  3  |     |
*  0 *                 * *****      * W_V1_T3  W_V4_T3  * --- *  3  *     *     *
|    |                 | ***        | W_V2_T3            |     |     |     | --- |
|    |                 | ********.   | W_V2_T1  W_V4_T2  |  2  | --- | --- |     |
|    |                 | *****.      | W_V4_T1            |     |  2  |     |     |
|    |                 | *******     | W_V3_T1            | --- |     |  2  |  2  |
|    | rater1          | **          | W_V3_T3            |     | --- |     |     |
| -1 + rater2   rater4 + ***        +                    +  1  +  1  + --- +     |
|    | rater3          | **.        |                    |     |     |     | --- |
|    |                 | *****.      | W_V1_T1            |     | --- |  1  |     |
|    |                 | .          | W_V1_T2  W_V3_T2  |     |     |     |     |
|    |                 | ***.       |                    |     |     |     |  1  |
|    |                 | *          |                    |     |     |     |     |
| -2 +                 + *.         +                    + --- +     + --- +     |
|    |                 | .          |                    |     |     |     |     |
|    |                 | *          |                    |     |     |     | --- |
|    |                 | *          | W_V2_T2            |     |     |     |     |
|    |                 |            |                    |     |     |     |     |
|    |                 | .          |                    |     |     |     |     |
| -3 +                 +            +                    +     +     +     +     |
|    |                 |            |                    |     |     |     |     |
|    |                 | .          |                    |     |     |     |     |
|    |                 |            |                    |     |     |     |     |
|    |                 |            |                    |     |     |     |     |
|    |                 |            |                    |     |     |     |     |
| -4 +                 +            +                    + (0) + (0) + (0) + (0) |
|-----+----------------+------------+--------------------+-----+-----+-----+-----|
|Measr|-raters         | * = 2      |-tasks              | S.1 | S.2 | S.3 | S.4 |
+-----------------------------------------------------------------------------+
```

Figures 12 to 15 are the tasks variable map for each version. Across all versions, Task 1 is more difficult than Task 2. However, for all other tasks, across all versions, the tasks increase in difficulty in the intended pattern with quite sufficient distance between Tasks 2, 3 and 4 on each version to give confidence that the tasks are performing as intended (see Figures 12 to 15).

Figure 12: Writing Version 1 – task variable map

```
+-------------------------------------------------------------------+
|Measr|-raters         |+examinees|-tasks  | S.1 | S.2 | S.3 | S.4 |
|-----+----------------+----------+--------+-----+-----+-----+-----|
|  4 +                 +          +        + (5) + (5) + (5) + (5) |
|    |                 |          |        |     |     |     |     |
|    |                 |          |        |     |     |     |     |
|    |                 |          |        |     |     |     |     |
|    |                 |          |        |     |     |     |     |
|    |                 |          |        |     |     |     |     |
|    |                 | **.      |        |     |     |     |     |
|  3 +                 +          +        +     +     +     +     |
|    |                 |          |        |     |     | --- |     |
|    |                 |          |        |     |     |     | --- |
|    |                 |          |        |     |     |     |     |
|    |                 |          |        |     |     |     |     |
|    |                 | ***      |        |     |     |     |     |
|  2 +                 +          + W_V1_T4 +    +     +     +     |
|    |                 |          |        |     | --- |     |     |
|    |                 |          |        | --- |     |     |  4  |
|    |                 | ****     |        |     |     |  4  |     |
|    |                 |          |        |     |     |     |     |
|    |                 |          |        |     |     |     |     |
|  1 +                 +          +        +     +     +     + --- |
|    |                 | ******   |        |     |     |     |     |
|    |                 |          |        |  4  |     | --- |     |
|    |                 | .        |        |     |     |     |     |
|    |                 | ****     |        |     |     |     |  3  |
|    |                 | *        |        | --- |     |  3  |     |
*  0 *                 *          *        *     *  4  *     *     *
|    |                 | ***      |        |     |     |     | --- |
|    |                 | .        | W_V1_T3 |  3 |     | --- |     |
|    |                 | *        |        |     |     |     |     |
|    |                 | ******* |        | --- |     |  2  |     |
|    |                 | **       |        |     |     |     |  2  |
|    | rater1          | .        |        |  2  |     | --- |     |
| -1 + rater2  rater4 + *****.    +        +     +     +     +     |
|    | rater3          | W_V1_T1 |        | --- |     |     | --- |
|    |                 | **.      | W_V1_T1 | --- |     |     |     |
|    |                 | .        | W_V1_T2 |     |     |  1  |     |
|    |                 | .        |        |     |     |     |  1  |
|    |                 | **.      |        |     |     |     |     |
|    |                 |          |        |     | --- |     |     |
| -2 +                 + *.       +        +     +     +     +     |
|    |                 |          |        |     |     |     |     |
|    |                 | .        |        |     |     | --- | --- |
|    |                 |          |        |     |     |     |     |
|    |                 |          |        |     |     |     |     |
|    |                 |          |        |     |     |     |     |
|    |                 |          |        |     |     |     |     |
| -3 +                 + .        +        + (1) + (3) + (0) + (0) |
|-----+----------------+----------+--------+-----+-----+-----+-----|
|Measr|-raters         | * = 2    |-tasks  | S.1 | S.2 | S.3 | S.4 |
+-------------------------------------------------------------------+
```

Figure 13: Writing Version 2 – task variable map

```
+----------------------------------------------------------------+
|Measr|-raters          |+examinees|-tasks   | S.1 | S.2 | S.3 | S.4 |
|-----+---------------+----------+---------+-----+-----+-----+-----|
|  3 +                 +          +         + (5) + (5) + (5) + (5) |
|    |                 |  *       |         |     |     |     |     |
|    |                 |          |         |     |     |     |     |
|    |                 |          |         |     |     |     | --- |
|    |                 |          |         |     |     |     |     |
|    |                 |          |         |     |     |     |     |
|    |                 |          |         | --- |     |     |     |
|    |                 |          |         |     |     |     |     |
|  2 +                 +          +         +     +     + --- +     |
|    |                 |          |         |     |     |     |     |
|    |                 |          |         |     |     |     |  4  |
|    |                 |          |         |     |     |     |     |
|    |                 |  ***     |         |     |     |     |     |
|    |                 |          |         |     |     |     |     |
|    |                 |          |         |     |     |     |     |
|    |                 |  **      |         |     |     |     |     |
|  1 +                 +          +         +     + --- +  4  + --- |
|    |                 |          |         |     |     |     |     |
|    |                 |  ***     | W_V2_T4 |  4  |     |     |     |
|    |                 |          |         |     |     |     |     |
|    |                 |  ****    |         |     |     | --- |     |
|    |                 |          |         |     |     |     |  3  |
|    |                 |          |         |     |     |     |     |
*   0 *                 *          *         *     *  4  *     *     *
|    |                 |          | W_V2_T3 | --- |     |  3  |     |
|    |                 |          | W_V2_T1 |     |     |     |     |
|    |                 |          |         |     |     |     | --- |
|    |                 |  *       |         |  3  |     |     |     |
|    |                 |          |         |     |     | --- |     |
|    |                 |  ***     |         | --- |     |     |     |
|    |                 |  ****    |         |     |     |     |  2  |
| -1 + rater2  rater4 +          +         +     + --- +     +     |
|    | rater3          |  *       |         |  2  |     |  2  |     |
|    |                 |          |         |     |     |     | --- |
|    |                 |          |         |     |     |     |     |
|    |                 |          |         | --- |     |     |     |
|    |                 |          |         |     |     |     |  1  |
|    |                 |  *       |         |     |     | --- |     |
|    |                 |          |         |     |     |     |     |
| -2 +                 +          + W_V2_T2 +     +     +     +     |
|    |                 |  *       |         |     |     |     | --- |
|    |                 |  *       |         |     |     |     |     |
|    |                 |          |         |     |     |     |     |
|    |                 |          |         |     |     |     |     |
|    |                 |          |         |     |     |     |     |
|    |                 |          |         |     |     |     |     |
| -3 +                 +          +         + (1) + (3) + (1) + (0) |
|-----+---------------+----------+---------+-----+-----+-----+-----|
|Measr|-raters          | * = 1    |-tasks   | S.1 | S.2 | S.3 | S.4 |
+----------------------------------------------------------------+
```

Figure 14: Writing Version 3 – task variable map

```
+------------------------------------------------------------------+
|Measr|-raters          |+examinees|-tasks   | S.1 | S.2 | S.3 | S.4 |
|-----+-----------------+----------+---------+-----+-----+-----+-----|
|  3 +                  +          +         + (5) + (5) + (5) + (5) |
|    |                  | *        |         |     |     |     |     |
|    |                  |          |         |     |     |     |     |
|    |                  |          |         |     |     |     |     |
|    |                  |          |         |     |     |     | --- |
|    |                  |          |         | --- | --- | --- |     |
|    |                  |          |         |     |     |     |     |
|  2 +                  +          +         +     +     +     +     |
|    |                  | **       | W_V3_T4 |     |     |     |     |
|    |                  |          |         |     |     |     |     |
|    |                  | ***      |         |     |     |     |  4  |
|    |                  | **       |         |  4  |  4  |     |     |
|    |                  |          |         |     |     |     |     |
|    |                  |          |         |     |     |     | --- |
|  1 +                  + *        +         +     +     +     +     |
|    |                  |          |         |     | --- | --- |     |
|    |                  |          |         |     |     |  4  |     |
|    |                  | *        |         |     |     |     |  3  |
|    |                  | **       | W_V3_T3 |  3  |     |     |     |
|    |                  | *        |         |     |  3  |     |     |
|    |                  | *        |         |     |     |     | --- |
*   0 *                 *          *         * --- *     *     *     *
|    |                  | **       |         |     |     |     |     |
|    |                  | *        |         |     |     | --- |     |
|    |                  | **       | W_V3_T1 |  2  | --- |     |  2  |
|    |                  |          |         |     |     |     |     |
|    |                  |          |         |     |     |     |     |
|    | rater1           | **       |         | --- |     |     |     |
| -1 + rater2   rater4  + *        +         +     +     +     + --- |
|    | rater3           | **       |         |     |     |  3  |     |
|    |                  |          |         |     |     |     |     |
|    |                  |          |         |  1  |  2  |     |     |
|    |                  |          | W_V3_T2 |     |     |     |     |
|    |                  |          |         |     |     |     |  1  |
|    |                  | *        |         |     |     |     |     |
| -2 +                  +          +         +     +     + --- +     |
|    |                  | *        |         |     |     |     |     |
|    |                  |          |         | --- |     |     |     |
|    |                  |          |         |     |     |     |     |
|    |                  | *        |         |     |     |     | --- |
|    |                  |          |         |     | --- |     |     |
|    |                  |          |         |     |     |     |     |
| -3 +                  +          +         +     +     +     +     |
|    |                  |          |         |     |     |     |     |
|    |                  |          |         |     |     |     |     |
|    |                  |          |         |     |     |     |     |
|    |                  |          |         |     |     |     |     |
|    |                  |          |         |     |     |     |     |
|    |                  |          |         |     |     |     |     |
| -4 +                  + *        +         + (0) + (0) + (2) + (0) |
|-----+-----------------+----------+---------+-----+-----+-----+-----|
|Measr|-raters          | * = 1    |-tasks   | S.1 | S.2 | S.3 | S.4 |
+------------------------------------------------------------------+
```

Figure 15: Writing Version 4 – task variable map

```
+---------------------------------------------------------------+
|Measr|-raters          |+examinees|-tasks  | S.1 | S.2 | S.3 | S.4 |
|-----+-----------------+----------+--------+-----+-----+-----+-----|
|  3 +                  +          +        + (5) + (5) + (5) + (5) |
|    |                  | *        |        |     |     |     |     |
|    |                  |          |        |     |     |     |     |
|    |                  |          |        |     |     |     |     |
|    |                  |          |        |     |     |     | --- |
|    |                  |          |        | --- | --- | --- |     |
|    |                  |          |        |     |     |     |     |
|  2 +                  +          +        +     +     +     +     |
|    |                  | **       | W_V3_T4 |     |     |     |     |
|    |                  |          |        |     |     |     |     |
|    |                  | ***      |        |     |     |     |  4  |
|    |                  | **       |        |  4  |  4  |     |     |
|    |                  |          |        |     |     |     |     |
|    |                  |          |        |     |     |     | --- |
|  1 +                  + *        +        +     +     +     +     |
|    |                  |          |        | --- | --- |     |     |
|    |                  |          |        |     |     |  4  |     |
|    |                  | *        |        |     |     |     |  3  |
|    |                  | **       | W_V3_T3 |  3  |     |     |     |
|    |                  | *        |        |     |  3  |     |     |
|    |                  | *        |        |     |     |     | --- |
*   0 *                 *          *        * --- *     *     *     *
|    |                  | **       |        |     |     |     |     |
|    |                  | *        |        |     |     | --- |     |
|    |                  | **       | W_V3_T1 |  2  | --- |     |  2  |
|    |                  |          |        |     |     |     |     |
|    |                  |          |        |     |     |     |     |
|    | rater1           | **       |        | --- |     |     |     |
| -1 + rater2  rater4 + *          +        +     +     +     + --- |
|    | rater3           | **       |        |     |     |  3  |     |
|    |                  |          |        |     |     |     |     |
|    |                  |          |        |  1  |  2  |     |     |
|    |                  |          | W_V3_T2 |     |     |     |     |
|    |                  |          |        |     |     |     |  1  |
|    |                  | *        |        |     |     |     |     |
| -2 +                  +          +        +     +     + --- +     |
|    |                  | *        |        |     |     |     |     |
|    |                  |          |        | --- |     |     |     |
|    |                  |          |        |     |     |     |     |
|    |                  | *        |        |     |     |     | --- |
|    |                  |          |        |     | --- |     |     |
|    |                  |          |        |     |     |     |     |
| -3 +                  +          +        +     +     +     +     |
|    |                  |          |        |     |     |     |     |
|    |                  |          |        |     |     |     |     |
|    |                  |          |        |     |     |     |     |
|    |                  |          |        |     |     |     |     |
|    |                  |          |        |     |     |     |     |
|    |                  |          |        |     |     |     |     |
| -4 +                  + *        +        + (0) + (0) + (2) + (0) |
|-----+-----------------+----------+--------+-----+-----+-----+-----|
|Measr|-raters          | * = 1    |-tasks  | S.1 | S.2 | S.3 | S.4 |
+---------------------------------------------------------------+
```

3.3 Section III: Pilot test-taker performance evaluation and rater evaluation

3.3.1 Skill component correlation

Appendices A to E contain information about the test-taker measurement reports. The numbers of test-takers for each test component varies. Table 24 shows the correlation among five skills using the test-taker data for the number of participants in each component. Overall, the skill correlations among the five components are satisfactory, ranging from the highest 0.79 (Grammar & Vocabulary vs. Reading) to the lowest 0.59 (Listening vs. Writing).

Table 24: Skill correlations

	G & V	Reading	Listening	Speaking	Writing
G & V	1				
Reading	0.79	1			
Listening	0.75	0.75	1		
Speaking	0.67	0.71	0.69	1	
Writing	0.64	0.70	0.59	0.64	1

Note: n=598 (G & V), n=597 (Reading), n=598 (Listening), n=184 (Speaking), n=178 (n=178)

3.3.2 Rater evaluation

Table 25 and Table 30 contain information about raters' measurement reports from the concurrent analyses for Speaking and Writing respectively. Separate measurement reports for each trial version are presented in Tables 26 to 29 for Speaking, and Tables 31 to 34 for Writing. In general, the fit indices from the concurrent reports or version reports indicate that raters' rating behaviours are consistent. The only exception is Rater 4 in Version 2 whose infit index slightly goes beyond the threshold (see Table 31).

3.3.2.1 Speaking

Table 25: Speaking all versions – raters measurement report

```
+-----------------------------------------------------------------------------------------------------------+
| Total   Total   Obsvd  Fair(M)|          Model | Infit       Outfit      |Estim.| Correlation | Exact Agree. |              |
| Score   Count   Average Average|Measure  S.E. | MnSq ZStd  MnSq ZStd |Discrm| PtMea PtExp | Obs %  Exp % | N raters      |
|-------------------------------+---------------+------------------------+------+-------------+--------------+---------------|
| 1557    516     3.02   2.69 |   -.11   .06 |  .86 -2.2   .94  -.8 | 1.04 |  .83   .82 | 37.1   38.5 | 1 rater1      |
| 1152    427     2.70   3.27 |   -.71   .06 |  .92 -1.0   .90 -1.1 | 1.17 |  .83   .81 | 42.6   40.9 | 2 rater2      |
| 1165    380     3.07   3.68 | -1.24   .06 | 1.11  1.3  1.28  2.7 |  .80 |  .79   .80 | 43.7   40.4 | 3 rater3      |
|  327    104     3.14   3.66 | -1.21   .12 | 1.11   .7  1.10   .5 |  .89 |  .77   .80 | 44.7   42.7 | 4 rater4      |
|-------------------------------+---------------+------------------------+------+-------------+--------------+---------------|
| 1050.3  356.8   2.98   3.32 |   -.82   .08 | 1.00  -.3  1.05   .3 |      |  .81       |              | Mean (Count: 4)|
|  448.2  153.9    .17    .40 |    .46   .03 |  .11  1.4   .15  1.5 |      |  .03       |              | S.D. (Population)|
|  517.5  177.7    .20    .46 |    .53   .03 |  .13  1.6   .17  1.8 |      |  .03       |              | S.D. (Sample) |
+-----------------------------------------------------------------------------------------------------------+
```

Table 26: Speaking Version 1 – raters measurement report

```
+-----------------------------------------------------------------------------------------------------+
| Total   Total   Obsvd  Fair(M)|          Model | Infit      Outfit     |Estim.| Correlation | Exact Agree. |            |
| Score   Count   Average Average|Measure   S.E. | MnSq ZStd  MnSq ZStd  |Discrm| PtMea PtExp | Obs %  Exp % | N raters   |
|-----------------------------------------------------------------------------------------------------|
| 1291    408     3.16   2.73 |   -.25   .07 | .85 -2.0   .93  -.7 | 1.05 |  .82   .81 | 35.2   40.0 | 1 rater1   |
|  508    168     3.02   3.27 |   -.82   .10 | .92  -.6   .94  -.4 | 1.13 |  .84   .83 | 40.3   42.9 | 2 rater2   |
|  509    160     3.18   3.52 | -1.16   .10 | 1.23  1.7  1.18  1.4 |  .80 |  .81   .82 | 43.9   42.4 | 3 rater3   |
|  149     42     3.55   3.99 | -1.99   .24 | 1.31  1.1  1.14   .5 |  .87 |  .87   .88 | 40.4   46.1 | 4 rater4   |
|-----------------------------------------------------------------------------------------------------|
|  614.3  194.5   3.23   3.38 | -1.05   .13 | 1.08   .1  1.05   .2 |      |  .83       |             | Mean (Count: 4)  |
|  417.4  133.0    .19    .45 |    .63   .07 |  .19  1.5   .12   .9 |      |  .02       |             | S.D. (Population)|
|  481.9  153.5    .22    .52 |    .73   .08 |  .22  1.7   .13  1.0 |      |  .02       |             | S.D. (Sample)    |
+-----------------------------------------------------------------------------------------------------+
```

Table 27: Speaking Version 2 – raters measurement report

```
+-----------------------------------------------------------------------------------------------------+
| Total   Total   Obsvd  Fair(M)|          Model | Infit      Outfit     |Estim.| Correlation | Exact Agree. |            |
| Score   Count   Average Average|Measure   S.E. | MnSq ZStd  MnSq ZStd  |Discrm| PtMea PtExp | Obs %  Exp % | N raters   |
|-----------------------------------------------------------------------------------------------------|
|  497    126     3.94   2.27 |   -.05   .16 | .52 -3.2   .54 -3.0 | 1.40 |  .94   .85 | 45.8   49.9 | 1 rater1   |
|  577    177     3.26   3.08 |   -.87   .11 | 1.04   .3  1.03   .2 | 1.05 |  .83   .83 | 46.2   49.2 | 2 rater2   |
|  574    168     3.42   3.37 | -1.25   .11 | 1.15  1.2  1.22  1.6 |  .76 |  .82   .82 | 47.2   49.3 | 3 rater3   |
|  173     45     3.84   3.68 | -1.73   .25 | 1.18   .7  1.09   .4 |  .90 |  .82   .84 | 52.4   53.0 | 4 rater4   |
|-----------------------------------------------------------------------------------------------------|
|  455.3  129.0   3.62   3.10 |   -.98   .16 |  .97  -.2   .97  -.2 |      |  .85       |             | Mean (Count: 4)  |
|  166.1   52.2    .29    .53 |    .61   .06 |  .27  1.8   .26  1.7 |      |  .05       |             | S.D. (Population)|
|  191.8   60.2    .33    .61 |    .71   .06 |  .31  2.1   .30  2.0 |      |  .06       |             | S.D. (Sample)    |
+-----------------------------------------------------------------------------------------------------+
```

Table 28: Speaking Version 3 – raters measurement report

```
+-----------------------------------------------------------------------------------------------------+
| Total   Total   Obsvd  Fair(M)|          Model | Infit      Outfit     |Estim.| Correlation | Exact Agree. |            |
| Score   Count   Average Average|Measure   S.E. | MnSq ZStd  MnSq ZStd  |Discrm| PtMea PtExp | Obs %  Exp % | N raters   |
|-----------------------------------------------------------------------------------------------------|
|  763    234     3.26   2.02 |    .67   .10 | .83 -1.6   .86 -1.2 | 1.12 |  .91   .88 | 41.8   41.9 | 1 rater1   |
|  684    211     3.24   2.60 |   -.30   .10 | 1.17  1.5  1.10   .8 |  .95 |  .85   .86 | 44.0   46.1 | 2 rater2   |
|  568    166     3.42   2.58 |   -.32   .12 |  .89  -.8   .99   .0 | 1.03 |  .88   .85 | 48.1   47.2 | 3 rater3   |
|  173     47     3.68   2.96 |   -.83   .25 | 1.37  1.5  1.30   .9 |  .67 |  .86   .89 | 46.7   49.2 | 4 rater4   |
|-----------------------------------------------------------------------------------------------------|
|  547.0  164.5   3.40   2.54 |   -.20   .14 | 1.07   .1  1.06   .1 |      |  .87       |             | Mean (Count: 4)  |
|  226.8   72.1    .18    .34 |    .54   .06 |  .22  1.4   .16   .9 |      |  .02       |             | S.D. (Population)|
|  261.9   83.3    .20    .39 |    .63   .07 |  .25  1.7   .19  1.0 |      |  .03       |             | S.D. (Sample)    |
+-----------------------------------------------------------------------------------------------------+
```

Table 29: Speaking Version 4 – raters measurement report

```
+-----------------------------------------------------------------------------------------------------+
| Total   Total   Obsvd  Fair(M)|          Model | Infit      Outfit     |Estim.| Correlation | Exact Agree. |            |
| Score   Count   Average Average|Measure   S.E. | MnSq ZStd  MnSq ZStd  |Discrm| PtMea PtExp | Obs %  Exp % | N raters   |
|-----------------------------------------------------------------------------------------------------|
|  497    126     3.94   2.47 |    .08   .16 | .52 -3.4   .54 -3.2 | 1.43 |  .93   .85 | 45.8   48.4 | 1 rater1   |
|  436    177     2.46   2.86 |   -.39   .10 | .87 -1.0   .84  -.9 | 1.16 |  .88   .87 | 36.5   42.6 | 2 rater2   |
|  519    168     3.09   3.88 | -1.56   .10 | 1.08   .7  1.27  1.7 |  .68 |  .83   .85 | 40.0   42.0 | 3 rater3   |
|  147     45     3.27   3.64 | -1.23   .19 | 1.15   .6  1.10   .4 |  .73 |  .81   .84 | 41.7   46.3 | 4 rater4   |
|-----------------------------------------------------------------------------------------------------|
|  399.8  129.0   3.19   3.21 |   -.77   .14 |  .91  -.8   .93  -.5 |      |  .86       |             | Mean (Count: 4)  |
|  149.1   52.2    .53    .57 |    .65   .04 |  .25  1.7   .28  1.9 |      |  .05       |             | S.D. (Population)|
|  172.1   60.2    .61    .66 |    .76   .05 |  .28  1.9   .32  2.1 |      |  .05       |             | S.D. (Sample)    |
+-----------------------------------------------------------------------------------------------------+
```

3.3.2.2   Writing

Table 30: Writing all versions – raters measurement report

```
+-----------------------------------------------------------------------------------------------------+
| Total   Total   Obsvd  Fair(M)|        Model | Infit       Outfit     |Estim.|       | Corr. | Exact Agree. |                  |
| Score   Count  Average Average|Measure  S.E. | MnSq ZStd  MnSq ZStd  |Discrm| Displ.| PtBis | Obs %  Exp % | N raters         |
|-----------------------------------------------------------------------------------------------------|
| 1766    510     3.46   3.80 A   -.79   .06 |  .82 -2.5  1.14  1.4 | 1.04 |  -.01 |  .46 | 51.9   41.3 | 1 rater1         |
| 1362    410     3.32   3.98 A  -1.05   .06 | 1.18  2.1  1.02   .2 |  .98 |   .01 |  .57 | 55.8   43.5 | 2 rater2         |
| 1359    399     3.41   4.04 A  -1.15   .06 | 1.02   .2   .99   .0 |  .93 |   .00 |  .55 | 59.2   43.7 | 3 rater3         |
|  470    130     3.62   4.01 A  -1.01   .11 | 1.03   .2   .75 -1.1 | 1.12 |   .02 |  .63 | 58.7   48.9 | 4 rater4         |
|-----------------------------------------------------------------------------------------------------|
| 1239.3  362.3   3.45   3.96   -1.00   .07 | 1.01   .0   .98   .1 |      |       |  .55 |             | Mean (Count: 4)  |
|  474.0  140.9    .11    .09     .13   .02 |  .13  1.7   .14  1.0 |      |       |  .06 |             | S.D. (Population)|
|  547.3  162.7    .12    .11     .15   .03 |  .15  1.9   .16  1.1 |      |       |  .07 |             | S.D. (Sample)    |
+-----------------------------------------------------------------------------------------------------+
```

Table 31: Writing Version 1 – raters measurement report

```
-------------------------------------------------------------------------------------------------------
| Total   Total   Obsvd  Fair(M)|        Model | Infit       Outfit     |Estim.|       | Corr. | Exact Agree. |                  |
| Score   Count  Average Average|Measure  S.E. | MnSq ZStd  MnSq ZStd  |Discrm| Displ.| PtBis | Obs %  Exp % | N raters         |
|-----------------------------------------------------------------------------------------------------|
| 1386    399     3.47   3.94 A   -.79   .07 |  .90 -1.2  1.19  1.8 |  .97 |   .04 |  .44 | 50.2   42.3 | 1 rater1         |
|  317    100     3.17   4.07 A  -1.05   .13 |  .90  -.5   .94  -.3 | 1.09 |   .08 |  .55 | 56.9   42.8 | 2 rater2         |
|  340    100     3.40   4.12 A  -1.15   .13 |  .86  -.8   .90  -.6 | 1.09 |  -.20 |  .56 | 59.6   42.7 | 3 rater3         |
|   85     25     3.40   4.11 A  -1.01   .25 |  .51 -1.7   .58 -1.3 | 1.39 |  -.16 |  .68 | 60.0   43.2 | 4 rater4         |
|-----------------------------------------------------------------------------------------------------|
|  532.0  156.0   3.36   4.06   -1.00   .14 |  .79 -1.1   .90  -.1 |      |       |  .56 |             | Mean (Count: 4)  |
|  503.0  143.6    .11    .07     .13   .07 |  .16   .5   .22  1.2 |      |       |  .08 |             | S.D. (Population)|
|  580.9  165.8    .13    .08     .15   .08 |  .19   .5   .25  1.4 |      |       |  .10 |             | S.D. (Sample)    |
+-----------------------------------------------------------------------------------------------------+
```

Table 32: Writing Version 2 – raters measurement report

```
+-----------------------------------------------------------------------------------------------------+
| Total   Total   Obsvd  Fair(M)|        Model | Infit       Outfit     |Estim.|       | Corr. | Exact Agree. |                  |
| Score   Count  Average Average|Measure  S.E. | MnSq ZStd  MnSq ZStd  |Discrm| Displ.| PtBis | Obs %  Exp % | N raters         |
|-----------------------------------------------------------------------------------------------------|
|  411    100     4.11   4.25 A  -1.05   .14 |  .91  -.4   .71 -1.0 | 1.17 |  -.33 |  .43 | 64.3   57.2 | 2 rater2         |
|  386    100     3.86   4.30 A  -1.15   .14 | 1.09   .5  1.04   .2 |  .89 |   .27 |  .44 | 64.3   57.3 | 3 rater3         |
|  122     26     4.69   4.62 A  -1.01   .51 | 1.58  1.1   .72   .0 |  .82 |   .81 |  .27 | 76.9   78.3 | 4 rater4         |
|-----------------------------------------------------------------------------------------------------|
|  306.3   75.3   4.22   4.39   -1.07   .26 | 1.19   .4   .83  -.3 |      |       |  .38 |             | Mean (Count: 3)  |
|  130.7   34.9    .35    .16     .06   .18 |  .28   .7   .15   .6 |      |       |  .08 |             | S.D. (Population)|
|  160.1   42.7    .43    .20     .07   .22 |  .35   .8   .19   .7 |      |       |  .09 |             | S.D. (Sample)    |
+-----------------------------------------------------------------------------------------------------+
```

Table 33: Writing Version 3 – raters measurement report

```
+-----------------------------------------------------------------------------------------------------+
| Total   Total   Obsvd  Fair(M)|        Model | Infit       Outfit     |Estim.|       | Corr. | Exact Agree. |                  |
| Score   Count  Average Average|Measure  S.E. | MnSq ZStd  MnSq ZStd  |Discrm| Displ.| PtBis | Obs %  Exp % | N raters         |
|-----------------------------------------------------------------------------------------------------|
|  380    111     3.42   3.48 A   -.79   .12 |  .88  -.8   .74 -1.5 | 1.22 |  -.15 |  .55 | 53.4   46.1 | 1 rater1         |
|  390    111     3.51   3.69 A  -1.05   .13 | 1.25  1.6  1.25  1.3 |  .69 |  -.07 |  .52 | 48.9   46.9 | 2 rater2         |
|  347    100     3.47   3.78 A  -1.15   .14 | 1.07   .4   .96  -.1 |  .91 |   .24 |  .55 | 57.0   47.6 | 3 rater3         |
|  207     54     3.83   3.68 A  -1.01   .20 |  .80  -.9   .61 -1.4 | 1.36 |   .03 |  .52 | 56.5   50.1 | 4 rater4         |
|-----------------------------------------------------------------------------------------------------|
|  331.0   94.0   3.56   3.66   -1.00   .15 | 1.00   .1   .89  -.5 |      |       |  .53 |             | Mean (Count: 4)  |
|   73.3   23.5    .16    .11     .13   .03 |  .18  1.0   .24  1.2 |      |       |  .02 |             | S.D. (Population)|
|   84.7   27.2    .19    .12     .15   .03 |  .20  1.2   .28  1.4 |      |       |  .02 |             | S.D. (Sample)    |
+-----------------------------------------------------------------------------------------------------+
```

Table 34: Writing Version 4 – raters measurement report

```
+-----------------------------------------------------------------------------------------------+
| Total   Total   Obsvd   Fair(M)|          Model | Infit      Outfit    |Estim.|       | Corr. | Exact Agree. |             |
| Score   Count   Average Average|Measure   S.E.  | MnSq ZStd  MnSq ZStd |Discrm| Displ.| PtBis | Obs %  Exp %  | N raters    |
|-------------------------------------------+-----------------------------+------+------+-------+--------------+-------------|
|  380    111     3.42    3.48 A  -.79    .12 | .88  -.8   .74 -1.5 | 1.22 | -.15 |  .55  | 53.4   46.1  | 1 rater1    |
|  390    111     3.51    3.69 A  -1.05   .13 | 1.25 1.6  1.25  1.3 |  .69 | -.07 |  .52  | 48.9   46.9  | 2 rater2    |
|  347    100     3.47    3.78 A  -1.15   .14 | 1.07  .4   .96  -.1 |  .91 |  .24 |  .55  | 57.0   47.6  | 3 rater3    |
|  207     54     3.83    3.68 A  -1.01   .20 | .80  -.9   .61 -1.4 | 1.36 |  .03 |  .52  | 56.5   50.1  | 4 rater4    |
|-------------------------------------------+-----------------------------+------+------+-------+--------------+-------------|
|  331.0   94.0   3.56    3.66 A  -1.00   .15 | 1.00  .1   .89  -.5 |      |      |  .53  |              | Mean (Count: 4)   |
|   73.3   23.5    .16     .11     .13    .03 |  .18 1.0   .24  1.2 |      |      |  .02  |              | S.D. (Population)  |
|   84.7   27.2    .19     .12     .15    .03 |  .20 1.2   .28  1.4 |      |      |  .02  |              | S.D. (Sample)     |
+-----------------------------------------------------------------------------------------------+
```

3.4   Discussion and suggestions for further analyses

The current design of the analysis involves various steps, including four anchored analyses of each test component (except for Grammar & Vocabulary) and five unanchored analyses of each test component. In addition to these nine concurrent analyses at the skill level, separate anchored analyses for each test component (except for Grammar & Vocabulary) for each version were also carried out. There are altogether 16 (4*4) separate analyses. A total of 25 IRT analyses were performed.

Even though the purpose of each analysis is justified, since the previous analyses for Aptis General were carried out in this way, an analysis design that combines all items on the test could be experimented with. To be specific, all data from the test-takers could be merged to be subjected to a single analysis, including the anchor items which will not contribute to the score report. The items that contribute to different skills can be calculated from this single analysis to calculate the reported score for each skill. Previous research (e.g., Henning, Hudson and Turner 1985; North 2000) has indicated that in terms of language proficiency, there is only one dimension, that is, language proficiency *per se*. In addition, unidimensionality is generally assumed in one parameter IRT analysis. The need to have separate analyses for each test component (and for each version) can be examined further, especially considering the items will be selected and mixed to construct operational test forms.

Anchor item performance from the new analysis and from previous analyses should be evaluated, and once satisfactory results (using the linear equation coefficient as included in this report) are obtained, it is suggested that the coefficients should be taken into account in adjusting the item difficulty index for the new items. If one of the purposes is to report test-takers' abilities using the same reporting scale as Aptis General, their ability index from this analysis should also be adjusted based on the anchor item comparison.

Considering the very different motivations between the pilot test-takers and the real targeted test-taker population, their performance is bound to be different. It is suggested that the analysis be repeated and results compared when live test data become available. The current live test design does not appear to include anchor items in operational test forms as the live test will be constructed based on the results from the analysis of this pilot data. It is suggested that a follow-up analysis should be carried out comparing item performance from this pilot and from live tests. Ideally, if discrepancies are to be identified, measures should be taken in updating item parameters in the item bank.

It is not clear what the next steps will be in getting item parameters for future new test items or whether there will be different rounds of pilot testing to collect data, or if item anchoring will be built into the test design. One-off piloting has advantages, but it also has disadvantages. For example, as mentioned above, test-taker characteristics and motivation are different. Live test anchoring is advisable as it can almost automatically collect data for new items based on the same group of test-takers under real test conditions. The disadvantage is that it will increase the test time. In the long run, creating live test forms with anchoring models is preferable. One suggestion to consider is to create live test form blueprints in order to have a balanced design of the number of anchored items from each skill/component and the total test time.

The current way of checking test form equivalence is acceptable. However, again, it is based on pilot test-taker data. It is suggested that test form information based on live data should be carried out when live test data become available. In addition, once the live test forms are operationalized, there will be a need to investigate how each test component works in different cultural contexts and whether the test form equivalence is still comparable.

Another aspect which may be worth considering is related to score reporting. Analysis of the pilot data has provided a complete set of Rasch analyses, however, the score reporting is still based on raw score conversion. The effects of generating score reports based on the test-taker ability estimates from the Rasch analysis could be experimented with to see if that will yield any differences in placing students at different CEFR levels.

This series of pilot test data analyses has yielded an abundant amount of information for operational test construction. Overall, the majority of the items piloted in this trial generated satisfactory item parameters in terms of item difficulty and item fit indices. Items that do not have satisfactory item parameters are not recommended for inclusion in live testing, and will be subject to further content review.

In general, the majority of the pilot items also demonstrated a good match between the item difficulty index generated from this analysis and their respective intended CEFR levels. The alignment of anchor item performance from Aptis General and Aptis for Teens is consistent and satisfactory, with the expected higher difficulty indices from the latter. Certain discrepancies are observed at the trial test version level but, equipped with the results from this analysis, more balanced versions of the operational test forms could be made possible.

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Appendix A: Grammar & Vocabulary examinees measurement report (arranged by N)

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.Z	STD	DISPLACE
1	-3.2168	1	30	2	0.7426	1.0953	0.3611	1.716	0.9217	0	0.288
2	-1.924	1	30	6	0.4604	1.1075	0.3911	2.2301	2.0122	0	-0.1887
3	-1.7255	1	30	7	0.4317	1.0335	0.221	1.2757	0.7213	0	0.0872
4	-1.7255	1	30	7	0.4317	0.6163	-0.9994	0.4437	-1.4496	0	0.4123
5	-1.5493	1	30	8	0.4084	1.2878	0.8113	2.309	2.5423	0	0.0393
6	-1.5493	1	30	8	0.4084	1.2717	0.7713	1.669	1.5317	0	0.4177
7	-1.5493	1	30	8	0.4084	0.9615	0.031	1.1319	0.4511	0	-0.1225
8	-1.5493	1	30	8	0.4084	0.9194	-0.0791	1.098	0.3711	0	0.2966
9	-1.5493	1	30	8	0.4084	2.0322	2.192	2.6212	2.9726	0	0.1038
10	-1.3906	1	30	9	0.3889	1.3088	0.8613	1.9284	2.1419	0	0.2673
11	-1.3906	1	30	9	0.3889	0.8079	-0.4092	1.1033	0.4011	0	0.2758
12	-1.3906	1	30	9	0.3889	0.9851	0.091	1.6206	1.5616	0	-0.1681
13	-1.3906	1	30	9	0.3889	1.3502	0.9514	1.5499	1.4216	0	0.1837
14	-1.3906	1	30	9	0.3889	1.1791	0.5712	2.1685	2.5422	0	-0.255
15	-1.2459	1	30	10	0.3724	1.0017	0.131	0.8396	-0.3992	0	0.2499
16	-1.2459	1	30	10	0.3724	1.2935	0.8413	2.231	2.8722	0	0.1182
17	-1.2459	1	30	10	0.3724	1.0483	0.251	1.5971	1.6316	0	-0.1039
18	-1.2459	1	30	10	0.3724	0.8566	-0.2691	1.2571	0.8213	0	0.049
19	-1.2459	1	30	10	0.3724	1.0899	0.3611	1.5906	1.6116	0	0.0874
20	-1.2459	1	30	10	0.3724	1.0587	0.2811	1.294	0.9213	0	-0.0244
21	-1.2459	1	30	10	0.3724	0.8631	-0.2491	0.8697	-0.2991	0	-0.1247
22	-1.2459	1	30	10	0.3724	0.9706	0.051	1.7688	1.9918	0	0.3791
23	-1.2459	1	30	10	0.3724	1.0828	0.3411	1.3566	1.0714	0	0.0461
24	-1.2459	1	30	10	0.3724	0.9163	-0.0991	1.0689	0.3111	0	0.0442
25	-1.2459	1	30	10	0.3724	0.8331	-0.3392	1.0969	0.3911	0	0.5229
26	-1.1125	1	30	11	0.3583	0.9039	-0.1391	0.9394	-0.0991	0	-0.1853
27	-1.1125	1	30	11	0.3583	1.0303	0.201	1.1913	0.6912	0	0.0544
28	-1.1125	1	30	11	0.3583	1.1253	0.4511	1.6283	1.8216	0	-0.1633
29	-1.1125	1	30	11	0.3583	1.4205	1.1314	1.1602	0.6012	0	0.4712
30	-1.1125	1	30	11	0.3583	1.0757	0.3211	1.1407	0.5411	0	0.1673
31	-1.1125	1	30	11	0.3583	1.5632	1.4216	1.7061	2.0017	0	0.2608
32	-1.1125	1	30	11	0.3583	0.85	-0.2992	1.4295	1.3414	0	0.207
33	-1.1125	1	30	11	0.3583	0.9949	0.111	1.3594	1.1514	0	-0.1864
34	-1.1125	1	30	11	0.3583	1.1477	0.5011	1.2578	0.8813	0	0.1334
35	-1.1125	1	30	11	0.3583	0.8339	-0.3492	0.9352	-0.1091	0	0.56
36	-1.1125	1	30	11	0.3583	0.9749	0.061	1.1402	0.5411	0	-0.2132
37	-1.1125	1	30	11	0.3583	1.0068	0.141	1.4395	1.3614	0	-0.0542
38	-1.1125	1	30	11	0.3583	1.2128	0.6612	1.6347	1.8416	0	-0.1936
39	-1.1125	1	30	11	0.3583	1.1578	0.5312	1.317	1.0413	0	-0.1263
40	-0.9885	1	30	12	0.3463	0.9378	-0.0491	1.2587	0.9313	0	0.0192
41	-0.9885	1	30	12	0.3463	1.1855	0.6012	1.8231	2.4218	0	-0.0446
42	-0.9885	1	30	12	0.3463	0.8066	-0.4492	1.0018	0.101	0	0.4049
43	-0.9885	1	30	12	0.3463	1.0334	0.211	1.7741	2.3018	0	0.0807
44	-0.8722	1	30	13	0.336	2.1268	2.5421	0.8731	-0.4091	0	0.6678
45	-0.8722	1	30	13	0.336	1.2168	0.6912	1.7535	2.4018	0	-0.0639
46	-0.8722	1	30	13	0.336	1.1729	0.5812	1.6916	2.2417	0	-0.1378
47	-0.8722	1	30	13	0.336	0.8865	-0.2191	1.3074	1.1413	0	0.2341
48	-0.8722	1	30	13	0.336	1.1488	0.5211	1.2398	0.9212	0	0.1064
49	-0.8722	1	30	13	0.336	0.9464	-0.0391	1.3538	1.2814	0	0.211
50	-0.8722	1	30	13	0.336	1.1979	0.6412	1.639	2.1016	0	-0.3042
51	-0.8722	1	30	13	0.336	0.9245	-0.0991	1.4665	1.6215	0	0.0896
52	-0.8722	1	30	13	0.336	1.1205	0.4511	1.2863	1.0713	0	0.2563
53	-0.8722	1	30	13	0.336	1.0543	0.2711	1.1513	0.6312	0	-0.2525
54	-0.8722	1	30	13	0.336	1.6144	1.5816	1.0906	0.4211	0	0.6122
55	-0.7622	1	30	14	0.3274	1.5603	1.5016	1.8578	2.8219	0	0.0922
56	-0.7622	1	30	14	0.3274	0.8449	-0.3592	1.0487	0.271	0	0.2302
57	-0.7622	1	30	14	0.3274	1.7543	1.9018	1.4856	1.7615	0	0.6389
58	-0.7622	1	30	14	0.3274	1.0715	0.3211	1.6119	2.1416	0	0.0348
59	-0.7622	1	30	14	0.3274	1.2807	0.8613	1.4759	1.7315	0	0.3487
60	-0.7622	1	30	14	0.3274	0.9203	-0.1191	1.1781	0.7512	0	0.264
61	-0.7622	1	30	14	0.3274	1.0143	0.161	0.9318	-0.1891	0	0.5949
62	-0.7622	1	30	14	0.3274	0.7574	-0.6492	0.9581	-0.079	0	0.2917
63	-0.7622	1	30	14	0.3274	0.8256	-0.4192	1.0265	0.191	0	0.4909
64	-0.6574	1	30	15	0.3203	0.9485	-0.0391	1.3184	1.2913	0	0.6738
65	-0.6574	1	30	15	0.3203	0.5614	-1.4394	0.7176	-1.2393	0	0.5779
66	-0.6574	1	30	15	0.3203	0.9583	-0.009	1.0875	0.4411	0	0.6279
67	-0.6574	1	30	15	0.3203	1.0354	0.221	1.9805	3.292	0	0.4153
68	-0.6574	1	30	15	0.3203	1.1977	0.6612	1.3212	1.3013	0	0.5195
69	-0.6574	1	30	15	0.3203	0.8882	-0.2291	0.9336	-0.1991	0	0.5502
70	-0.6574	1	30	15	0.3203	0.77	-0.6292	1.1565	0.7012	0	0.6653
71	-0.6574	1	30	15	0.3203	0.7577	-0.6692	0.9109	-0.2991	0	0.2374
72	-0.5568	1	30	16	0.3144	0.6355	-1.1494	0.8174	-0.7792	0	0.4648
73	-0.5568	1	30	16	0.3144	1.2724	0.8613	1.2026	0.9112	0	0.194
74	-0.5568	1	30	16	0.3144	1.2087	0.7012	1.6084	2.3316	0	0.2572
75	-0.5568	1	30	16	0.3144	0.9225	-0.1291	0.7171	-1.2993	0	0.7609

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.Z	STD	DISPLACE
76	-0.5568	1	30	16	0.3144	0.8292	-0.4292	0.8151	-0.7892	0	0.649
77	-0.5568	1	30	16	0.3144	0.6322	-1.1594	0.6492	-1.6794	0	0.8066
78	-0.5568	1	30	16	0.3144	0.8868	-0.2391	1.0442	0.271	0	0.4707
79	-0.5568	1	30	16	0.3144	1.294	0.9213	1.1963	0.8812	0	0.0709
80	-0.5568	1	30	16	0.3144	0.9047	-0.1791	0.8445	-0.6392	0	0.0734
81	-0.5568	1	30	16	0.3144	1.1482	0.5411	1.1633	0.7512	0	0.3718
82	-0.5568	1	30	16	0.3144	0.8346	-0.4092	0.7397	-1.1793	0	-0.0188
83	-0.5568	1	30	16	0.3144	0.881	-0.2591	0.8433	-0.6492	0	0.573
84	-0.5568	1	30	16	0.3144	0.8834	-0.2491	1.2762	1.1913	0	0.6556
85	-0.5568	1	30	16	0.3144	0.7959	-0.5492	1.1614	0.7512	0	0.3055
86	-0.5568	1	30	16	0.3144	0.8061	-0.5092	0.9453	-0.1691	0	0.7939
87	-0.5568	1	30	16	0.3144	0.9185	-0.1391	0.8983	-0.3791	0	0.5802
88	-0.5568	1	30	16	0.3144	0.474	-1.8695	0.7001	-1.3893	0	0.5296
89	-0.5568	1	30	16	0.3144	0.9194	-0.1391	1.051	0.3011	0	0.0646
90	-0.5568	1	30	16	0.3144	0.8815	-0.2591	1.2322	1.0212	0	0.1264
91	-0.5568	1	30	16	0.3144	0.8433	-0.3892	1.0934	0.4711	0	0.5925
92	-0.5568	1	30	16	0.3144	0.5105	-1.6995	0.5897	-2.0394	0	0.6183
93	-0.5568	1	30	16	0.3144	0.9122	-0.1591	0.6849	-1.4793	0	0.7596
94	-0.5568	1	30	16	0.3144	1.1826	0.6312	0.9802	-0.009	0	-0.2907
95	-0.4594	1	30	17	0.3098	0.8443	-0.3892	1.1749	0.8212	0	0.5809
96	-0.4594	1	30	17	0.3098	0.5943	-1.3394	0.9317	-0.2391	0	0.5934
97	-0.4594	1	30	17	0.3098	1.0356	0.221	0.8308	-0.7392	0	0.6852
98	-0.4594	1	30	17	0.3098	0.9356	-0.0891	1.2124	0.9812	0	0.4623
99	-0.4594	1	30	17	0.3098	0.8461	-0.3792	0.704	-1.4293	0	0.4188
100	-0.4594	1	30	17	0.3098	0.8222	-0.4592	0.8894	-0.4491	0	0.1517
101	-0.4594	1	30	17	0.3098	0.9547	-0.029	1.189	0.8812	0	0.0689
102	-0.4594	1	30	17	0.3098	0.9421	-0.0691	1.2256	1.0312	0	0.3418
103	-0.4594	1	30	17	0.3098	1.3666	1.1114	0.8517	-0.6391	0	0.7667
104	-0.4594	1	30	17	0.3098	1.5616	1.5616	0.8977	-0.4091	0	0.8647
105	-0.4594	1	30	17	0.3098	1.2696	0.8613	1.3585	1.5414	0	-0.0709
106	-0.4594	1	30	17	0.3098	0.5903	-1.3494	0.7281	-1.2893	0	0.3637
107	-0.3646	1	30	18	0.3063	1.5917	1.6316	1.1942	0.9212	0	0.7779
108	-0.3646	1	30	18	0.3063	1.1622	0.5812	0.946	-0.1791	0	0.0457
109	-0.3646	1	30	18	0.3063	0.8607	-0.3291	1.0745	0.4111	0	0.6102
110	-0.3646	1	30	18	0.3063	0.5503	-1.5294	0.8205	-0.8192	0	0.5866
111	-0.3646	1	30	18	0.3063	1.4038	1.2014	1.3334	1.4813	0	0.3385
112	-0.3646	1	30	18	0.3063	0.8034	-0.5292	0.9769	-0.039	0	0.6324
113	-0.3646	1	30	18	0.3063	0.6091	-1.2794	0.9421	-0.1991	0	0.6386
114	-0.3646	1	30	18	0.3063	1.5077	1.4415	1.7906	3.0718	0	0.4278
115	-0.3646	1	30	18	0.3063	0.9848	0.061	0.6958	-1.5193	0	0.5516
116	-0.3646	1	30	18	0.3063	0.7033	-0.8993	0.9194	-0.3091	0	0.5679
117	-0.3646	1	30	18	0.3063	0.6995	-0.9093	0.7882	-0.9892	0	0.8177
118	-0.3646	1	30	18	0.3063	0.527	-1.6395	0.7418	-1.2493	0	0.5176
119	-0.3646	1	30	18	0.3063	1.1148	0.4511	1.0417	0.261	0	0.5731
120	-0.2716	1	30	19	0.3037	1.4946	1.4115	1.435	1.8914	0	0.409
121	-0.2716	1	30	19	0.3037	0.748	-0.7193	0.7499	-1.2293	0	0.7196
122	-0.2716	1	30	19	0.3037	0.5188	-1.6695	0.7188	-1.4093	0	0.6798
123	-0.2716	1	30	19	0.3037	0.8802	-0.2691	0.7903	-0.9992	0	0.7244
124	-0.2716	1	30	19	0.3037	0.8564	-0.3391	1.0103	0.121	0	0.7423
125	-0.2716	1	30	19	0.3037	0.7372	-0.7593	0.9366	-0.2391	0	0.5204
126	-0.2716	1	30	19	0.3037	0.5997	-1.3094	0.5568	-2.4494	0	0.5765
127	-0.2716	1	30	19	0.3037	0.8334	-0.4192	1.0993	0.5311	0	0.376
128	-0.2716	1	30	19	0.3037	0.7323	-0.7793	0.9307	-0.2691	0	0.5851
129	-0.2716	1	30	19	0.3037	0.7438	-0.7393	0.8155	-0.8592	0	0.7636
130	-0.2716	1	30	19	0.3037	1.8772	2.2219	1.1961	0.9412	0	0.7007
131	-0.2716	1	30	19	0.3037	0.3394	-2.6297	0.4855	-2.9695	0	0.7282
132	-0.2716	1	30	19	0.3037	1.8367	2.1418	1.4825	2.0615	0	0.229
133	-0.2716	1	30	19	0.3037	0.9562	-0.019	1.4277	1.8614	0	0.7648
134	-0.2716	1	30	19	0.3037	1.1283	0.4811	1.1362	0.6911	0	0.4766
135	-0.1799	1	30	20	0.302	0.5525	-1.4894	0.5828	-2.2894	0	0.808
136	-0.1799	1	30	20	0.302	0.5029	-1.7195	0.8644	-0.6091	0	0.7966
137	-0.1799	1	30	20	0.302	0.8388	-0.3992	1.0337	0.231	0	0.7637
138	-0.1799	1	30	20	0.302	1.0728	0.3211	0.902	-0.4091	0	0.5319
139	-0.1799	1	30	20	0.302	1.2325	0.7612	0.9233	-0.3091	0	0.6745
140	-0.1799	1	30	20	0.302	1.2006	0.6712	1.357	1.6014	0	0.4377
141	-0.1799	1	30	20	0.302	0.6572	-1.0593	0.7543	-1.2092	0	0.8058
142	-0.1799	1	30	20	0.302	0.7511	-0.6992	1.1204	0.6211	0	0.6591
143	-0.1799	1	30	20	0.302	1.4819	1.3715	1.0577	0.3411	0	0.661
144	-0.1799	1	30	20	0.302	0.9899	0.081	0.8358	-0.7592	0	0.5852
145	-0.1799	1	30	20	0.302	1.3712	1.1014	1.0621	0.3611	0	0.5578
146	-0.1799	1	30	20	0.302	0.83	-0.4292	1.2807	1.3013	0	0.6976
147	-0.1799	1	30	20	0.302	0.4864	-1.7995	0.5186	-2.7395	0	0.6979
148	-0.1799	1	30	20	0.302	0.4905	-1.7795	0.6294	-1.9794	0	0.7567
149	-0.1799	1	30	20	0.302	0.6785	-0.9693	0.9128	-0.3591	0	0.8074
150	-0.1799	1	30	20	0.302	0.8662	-0.3091	1.2704	1.2613	0	0.5998
151	-0.1799	1	30	20	0.302	0.9468	-0.0491	1.451	1.9615	0	0.6363
152	-0.1799	1	30	20	0.302	0.9649	0.011	1.1748	0.8612	0	0.4725
153	-0.1799	1	30	20	0.302	0.9179	-0.1391	1.0595	0.3511	0	0.247
154	-0.1799	1	30	20	0.302	1.0781	0.3411	1.045	0.281	0	0.678
155	-0.1799	1	30	20	0.302	0.8851	-0.2491	0.8213	-0.8392	0	0.2638

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.Z	STD	DISPLACE
156	-0.1799	1	30	20	0.302	1.3302	1.0013	1.1332	0.6811	0	0.4964
157	-0.1799	1	30	20	0.302	0.5082	-1.6995	0.7921	-0.9992	0	0.5798
158	-0.1799	1	30	20	0.302	0.7887	-0.5692	0.7152	-1.4393	0	0.6118
159	-0.1799	1	30	20	0.302	1.2311	0.7512	0.8075	-0.9092	0	0.6362
160	-0.089	1	30	21	0.3011	1.1269	0.4711	0.9051	-0.3991	0	0.3883
161	-0.089	1	30	21	0.3011	0.6647	-1.0093	0.7149	-1.4393	0	0.4437
162	-0.089	1	30	21	0.3011	0.6291	-1.1494	0.7665	-1.1392	0	0.6373
163	-0.089	1	30	21	0.3011	1.283	0.8813	0.8568	-0.6491	0	0.545
164	-0.089	1	30	21	0.3011	0.6478	-1.0794	0.9942	0.041	0	0.8173
165	-0.089	1	30	21	0.3011	1.3913	1.1414	1.1973	0.9512	0	0.314
166	-0.089	1	30	21	0.3011	1.0671	0.3111	0.8474	-0.6992	0	0.7865
167	-0.089	1	30	21	0.3011	1.0666	0.3111	0.9213	-0.3191	0	0.5227
168	-0.089	1	30	21	0.3011	0.7591	-0.6592	1.1197	0.6211	0	0.7942
169	-0.089	1	30	21	0.3011	1.0219	0.181	1.4388	1.9114	0	0.7131
170	-0.089	1	30	21	0.3011	0.706	-0.8493	0.9859	0.001	0	0.5239
171	-0.089	1	30	21	0.3011	0.9527	-0.029	1.1099	0.5811	0	0.357
172	-0.089	1	30	21	0.3011	1.9404	2.3019	1.9594	3.662	0	0.5564
173	-0.089	1	30	21	0.3011	0.4426	-1.9896	0.7121	-1.4593	0	0.7422
174	-0.089	1	30	21	0.3011	0.814	-0.4692	0.8635	-0.6091	0	0.6478
175	-0.089	1	30	21	0.3011	0.4638	-1.8795	0.5941	-2.2094	0	0.856
176	-0.089	1	30	21	0.3011	0.8011	-0.5192	1.0563	0.3311	0	0.7341
177	-0.089	1	30	21	0.3011	1.4753	1.3415	2.1055	4.0921	0	0.32
178	-0.089	1	30	21	0.3011	0.4947	-1.7295	0.6041	-2.1394	0	0.8246
179	-0.089	1	30	21	0.3011	1.0078	0.141	0.9864	0.001	0	0.7776
180	0.0016	1	30	22	0.3009	0.8432	-0.3692	0.7246	-1.3693	0	0.6739
181	0.0016	1	30	22	0.3009	1.0701	0.3111	1.2778	1.2713	0	0.7633
182	0.0016	1	30	22	0.3009	1.0133	0.151	0.9786	-0.029	0	0.6365
183	0.0016	1	30	22	0.3009	1.0825	0.3511	1.0356	0.241	0	0.5003
184	0.0016	1	30	22	0.3009	1.757	1.9118	1.3249	1.4613	0	0.8688
185	0.0016	1	30	22	0.3009	1.4942	1.3615	1.3871	1.7014	0	0.6741
186	0.0016	1	30	22	0.3009	0.9191	-0.1291	0.7949	-0.9692	0	0.8837
187	0.0016	1	30	22	0.3009	0.6784	-0.9393	0.9944	0.041	0	0.6217
188	0.0016	1	30	22	0.3009	0.5709	-1.3694	0.8203	-0.8292	0	0.7069
189	0.0016	1	30	22	0.3009	0.5553	-1.4294	0.7465	-1.2393	0	0.8113
190	0.0016	1	30	22	0.3009	1.1859	0.6212	1.2534	1.1813	0	0.6874
191	0.0016	1	30	22	0.3009	0.9395	-0.0591	1.1996	0.9512	0	0.3504
192	0.0016	1	30	22	0.3009	0.6701	-0.9693	0.916	-0.3391	0	0.8009
193	0.0016	1	30	22	0.3009	0.8671	-0.2891	0.9545	-0.149	0	0.8199
194	0.0016	1	30	22	0.3009	0.3631	-2.3796	0.6072	-2.0894	0	0.7831
195	0.0016	1	30	22	0.3009	0.6099	-1.2094	0.7839	-1.0292	0	0.7658
196	0.0016	1	30	22	0.3009	0.7164	-0.7993	0.8509	-0.6691	0	0.7001
197	0.0016	1	30	22	0.3009	0.707	-0.8293	0.5988	-2.1494	0	0.6907
198	0.0922	1	30	23	0.3013	1.1946	0.6412	0.9967	0.061	0	0.5991
199	0.0922	1	30	23	0.3013	1.1185	0.4411	0.9246	-0.2791	0	0.7859
200	0.0922	1	30	23	0.3013	0.9853	0.071	0.9147	-0.3291	0	0.546
201	0.0922	1	30	23	0.3013	0.7704	-0.5992	1.1056	0.5411	0	0.7029
202	0.0922	1	30	23	0.3013	0.5843	-1.2894	0.7721	-1.0692	0	0.7625
203	0.0922	1	30	23	0.3013	0.7881	-0.5392	0.7298	-1.3093	0	0.8522
204	0.0922	1	30	23	0.3013	1.0131	0.151	1.2345	1.0812	0	0.8141
205	0.0922	1	30	23	0.3013	0.7026	-0.8393	0.9381	-0.2191	0	0.7208
206	0.0922	1	30	23	0.3013	0.9099	-0.1491	1.0407	0.261	0	0.6747
207	0.0922	1	30	23	0.3013	0.9245	-0.0991	0.8813	-0.4991	0	0.6523
208	0.0922	1	30	23	0.3013	0.7979	-0.5092	0.9975	0.061	0	0.7768
209	0.1833	1	30	24	0.3023	0.8738	-0.2491	0.6	-2.0394	0	0.7817
210	0.1833	1	30	24	0.3023	0.9524	-0.019	0.7931	-0.9292	0	0.7115
211	0.1833	1	30	24	0.3023	0.6275	-1.0994	0.8226	-0.7692	0	0.8714
212	0.1833	1	30	24	0.3023	0.7075	-0.8093	0.8544	-0.6091	0	0.6363
213	0.1833	1	30	24	0.3023	1.0226	0.181	0.6504	-1.7293	0	0.637
214	0.1833	1	30	24	0.3023	0.8607	-0.2991	1.0091	0.111	0	0.7945
215	0.1833	1	30	24	0.3023	1.0856	0.3511	1.0898	0.4711	0	0.6866
216	0.1833	1	30	24	0.3023	0.8076	-0.4592	0.7563	-1.1192	0	0.8236
217	0.1833	1	30	24	0.3023	1.1868	0.6212	0.827	-0.7492	0	0.5697
218	0.1833	1	30	24	0.3023	1.5071	1.3615	1.2858	1.2513	0	0.7341
219	0.1833	1	30	24	0.3023	0.7134	-0.7793	0.9388	-0.2091	0	0.7522
220	0.1833	1	30	24	0.3023	0.5586	-1.3794	0.7959	-0.9092	0	0.8613
221	0.1833	1	30	24	0.3023	0.7039	-0.8193	0.8053	-0.8592	0	0.7471
222	0.1833	1	30	24	0.3023	0.6916	-0.8593	1.193	0.8912	0	0.787
223	0.1833	1	30	24	0.3023	0.7674	-0.5992	0.7639	-1.0792	0	0.8617
224	0.1833	1	30	24	0.3023	1.3226	0.9513	1.1997	0.9212	0	0.8301
225	0.1833	1	30	24	0.3023	1.0072	0.141	0.9895	0.031	0	0.7555
226	0.1833	1	30	24	0.3023	0.9084	-0.1491	1.0881	0.4611	0	0.8537
227	0.1833	1	30	24	0.3023	0.7232	-0.7493	0.6355	-1.8194	0	0.6158
228	0.1833	1	30	24	0.3023	0.7816	-0.5492	0.7106	-1.3793	0	0.8277
229	0.1833	1	30	24	0.3023	0.521	-1.5395	0.7871	-0.9592	0	0.8603
230	0.275	1	30	25	0.3037	0.6496	-1.0094	0.8002	-0.8592	0	0.815
231	0.275	1	30	25	0.3037	1.1088	0.4111	1.0003	0.081	0	0.765
232	0.275	1	30	25	0.3037	1.1381	0.4911	0.9586	-0.109	0	0.7675
233	0.275	1	30	25	0.3037	0.658	-0.9693	0.8785	-0.4691	0	0.8083
234	0.275	1	30	25	0.3037	0.8721	-0.2591	0.7066	-1.3493	0	0.7569
235	0.275	1	30	25	0.3037	0.5648	-1.3394	1.1061	0.5211	0	0.8175

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.Z	STD	DISPLACE
236	0.275	1	30	25	0.3037	0.5262	-1.4995	0.6482	-1.6794	0	0.8467
237	0.275	1	30	25	0.3037	0.7581	-0.6192	0.9858	0.011	0	0.7567
238	0.275	1	30	25	0.3037	1.6972	1.7417	1.786	2.8518	0	0.8918
239	0.275	1	30	25	0.3037	0.8297	-0.3892	0.7366	-1.1793	0	0.7095
240	0.275	1	30	25	0.3037	0.7684	-0.5892	0.934	-0.2191	0	0.8499
241	0.275	1	30	25	0.3037	0.5032	-1.5995	0.8152	-0.7792	0	0.8711
242	0.275	1	30	25	0.3037	0.747	-0.6593	0.7548	-1.0892	0	0.777
243	0.275	1	30	25	0.3037	0.6117	-1.1494	0.9418	-0.1791	0	0.8078
244	0.275	1	30	25	0.3037	1.1055	0.4011	1.3118	1.3113	0	0.8393
245	0.275	1	30	25	0.3037	0.8731	-0.2491	0.7749	-0.9792	0	0.5487
246	0.275	1	30	25	0.3037	0.8844	-0.2191	1.0938	0.4711	0	0.7939
247	0.275	1	30	25	0.3037	0.6929	-0.8493	0.7134	-1.3093	0	0.7892
248	0.275	1	30	25	0.3037	1.3636	1.0314	1.1959	0.8812	0	0.7472
249	0.275	1	30	25	0.3037	0.688	-0.8593	1.182	0.8212	0	0.8532
250	0.275	1	30	25	0.3037	0.6566	-0.9793	0.6713	-1.5393	0	0.8017
251	0.3678	1	30	26	0.3056	1.1126	0.4211	0.9939	0.051	0	0.8198
252	0.3678	1	30	26	0.3056	0.455	-1.8095	0.5267	-2.3295	0	0.8381
253	0.3678	1	30	26	0.3056	1.278	0.8313	1.3848	1.5114	0	0.713
254	0.3678	1	30	26	0.3056	0.5061	-1.5695	0.8782	-0.4491	0	0.8584
255	0.3678	1	30	26	0.3056	0.8573	-0.2991	1.1374	0.6311	0	0.782
256	0.3678	1	30	26	0.3056	0.4509	-1.8295	0.5633	-2.0994	0	0.8446
257	0.3678	1	30	26	0.3056	0.8707	-0.2591	0.8413	-0.6192	0	0.8529
258	0.3678	1	30	26	0.3056	0.466	-1.7495	0.6029	-1.8594	0	0.8745
259	0.3678	1	30	26	0.3056	0.7039	-0.7993	0.7021	-1.3093	0	0.7944
260	0.3678	1	30	26	0.3056	0.6431	-1.0194	0.9778	-0.009	0	0.7664
261	0.3678	1	30	26	0.3056	0.7636	-0.5992	1.1671	0.7412	0	0.7893
262	0.3678	1	30	26	0.3056	0.7628	-0.5992	0.765	-0.9892	0	0.8421
263	0.3678	1	30	26	0.3056	0.8181	-0.4192	0.7612	-1.0092	0	0.7463
264	0.3678	1	30	26	0.3056	0.4707	-1.7295	0.61	-1.8194	0	0.8271
265	0.3678	1	30	26	0.3056	1.2402	0.7412	0.8696	-0.4891	0	0.7277
266	0.3678	1	30	26	0.3056	0.7892	-0.5092	0.5453	-2.2095	0	0.7816
267	0.3678	1	30	26	0.3056	1.2742	0.8213	1.3467	1.3813	0	0.8263
268	0.3678	1	30	26	0.3056	0.7114	-0.7793	0.7963	-0.8292	0	0.8821
269	0.3678	1	30	26	0.3056	1.736	1.8017	1.3277	1.3213	0	0.5772
270	0.3678	1	30	26	0.3056	0.8777	-0.2391	0.6508	-1.5893	0	0.7525
271	0.3678	1	30	26	0.3056	0.661	-0.9593	0.72	-1.2193	0	0.8815
272	0.3678	1	30	26	0.3056	1.6412	1.6216	1.459	1.7615	0	0.7923
273	0.4619	1	30	27	0.3078	0.664	-0.9393	0.9722	-0.029	0	0.8975
274	0.4619	1	30	27	0.3078	1.2761	0.8213	1.4497	1.6614	0	0.9074
275	0.4619	1	30	27	0.3078	1.3089	0.9013	1.1606	0.6912	0	0.7845
276	0.4619	1	30	27	0.3078	1.0365	0.221	1.3479	1.3313	0	0.8968
277	0.4619	1	30	27	0.3078	0.7256	-0.7193	0.9755	-0.009	0	0.7489
278	0.4619	1	30	27	0.3078	0.6103	-1.1394	0.7135	-1.1893	0	0.7968
279	0.4619	1	30	27	0.3078	0.832	-0.3692	0.9651	-0.059	0	0.7936
280	0.4619	1	30	27	0.3078	0.6055	-1.1594	0.6332	-1.6094	0	0.7634
281	0.4619	1	30	27	0.3078	1.1162	0.4311	1.0615	0.3211	0	0.9079
282	0.4619	1	30	27	0.3078	0.8035	-0.4592	1.0538	0.2911	0	0.7731
283	0.4619	1	30	27	0.3078	0.8951	-0.1791	1.4405	1.6314	0	0.8612
284	0.4619	1	30	27	0.3078	0.6608	-0.9493	0.9612	-0.069	0	0.8291
285	0.4619	1	30	27	0.3078	0.8117	-0.4392	1.3926	1.4814	0	0.7633
286	0.4619	1	30	27	0.3078	1.3674	1.0314	1.1437	0.6311	0	0.6341
287	0.4619	1	30	27	0.3078	0.7078	-0.7793	1.0396	0.241	0	0.8329
288	0.4619	1	30	27	0.3078	0.5925	-1.2094	0.6957	-1.2793	0	0.8005
289	0.4619	1	30	27	0.3078	0.6791	-0.8893	0.7497	-1.0093	0	0.8709
290	0.4619	1	30	27	0.3078	1.0213	0.181	1.0193	0.161	0	0.8156
291	0.4619	1	30	27	0.3078	0.4484	-1.8296	0.7011	-1.2493	0	0.8869
292	0.4619	1	30	27	0.3078	0.7211	-0.7393	0.5925	-1.8294	0	0.7796
293	0.4619	1	30	27	0.3078	0.7254	-0.7193	0.8341	-0.6192	0	0.8631
294	0.4619	1	30	27	0.3078	0.5401	-1.4195	0.6933	-1.2893	0	0.888
295	0.4619	1	30	27	0.3078	0.5309	-1.4595	0.5231	-2.2395	0	0.844
296	0.4619	1	30	27	0.3078	0.9309	-0.0791	1.0538	0.2911	0	0.6841
297	0.5574	1	30	28	0.3106	1.0779	0.3311	0.7277	-1.0593	0	0.691
298	0.5574	1	30	28	0.3106	0.3486	-2.3397	0.5714	-1.8494	0	0.9148
299	0.5574	1	30	28	0.3106	0.52	-1.5095	0.6378	-1.4994	0	0.8428
300	0.5574	1	30	28	0.3106	1.3841	1.0714	1.2336	0.9112	0	0.8506
301	0.5574	1	30	28	0.3106	0.491	-1.6295	0.6974	-1.1993	0	0.8607
302	0.5574	1	30	28	0.3106	0.6553	-0.9693	0.7696	-0.8592	0	0.8228
303	0.5574	1	30	28	0.3106	0.9338	-0.0691	1.0014	0.091	0	0.8047
304	0.5574	1	30	28	0.3106	0.8679	-0.2591	0.6572	-1.3993	0	0.7697
305	0.5574	1	30	28	0.3106	0.8051	-0.4592	0.9901	0.051	0	0.8598
306	0.5574	1	30	28	0.3106	0.7376	-0.6793	0.6702	-1.3293	0	0.8112
307	0.5574	1	30	28	0.3106	0.9858	0.081	0.8897	-0.3491	0	0.7241
308	0.5574	1	30	28	0.3106	0.7627	-0.5992	1.0303	0.201	0	0.9139
309	0.5574	1	30	28	0.3106	1.0204	0.181	1.1407	0.6011	0	0.738
310	0.5574	1	30	28	0.3106	0.5348	-1.4395	0.6036	-1.6794	0	0.8669
311	0.5574	1	30	28	0.3106	0.3208	-2.4997	0.4905	-2.3195	0	0.9206
312	0.5574	1	30	28	0.3106	0.8512	-0.3091	1.2613	1.0013	0	0.8051
313	0.5574	1	30	28	0.3106	1.0095	0.151	0.7435	-0.9793	0	0.7797
314	0.5574	1	30	28	0.3106	0.8729	-0.2491	1.4556	1.6115	0	0.8953
315	0.5574	1	30	28	0.3106	1.0003	0.121	0.8988	-0.3091	0	0.7566

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.Z	STD	DISPLACE
316	0.5574	1	30	28	0.3106	0.7102	-0.7693	0.9026	-0.2891	0	0.8854
317	0.5574	1	30	28	0.3106	0.9355	-0.0591	0.8612	-0.4691	0	0.7595
318	0.5574	1	30	28	0.3106	0.4663	-1.7395	0.6887	-1.2393	0	0.8741
319	0.6548	1	30	29	0.3137	1.0207	0.181	1.2506	0.9313	0	0.9286
320	0.6548	1	30	29	0.3137	1.1871	0.6112	0.6882	-1.1693	0	0.6689
321	0.6548	1	30	29	0.3137	0.8026	-0.4692	0.8765	-0.3691	0	0.8314
322	0.6548	1	30	29	0.3137	1.1215	0.4411	0.989	0.051	0	0.6834
323	0.6548	1	30	29	0.3137	0.6069	-1.1494	0.5715	-1.7494	0	0.8181
324	0.6548	1	30	29	0.3137	0.8068	-0.4492	1.0826	0.3811	0	0.9091
325	0.6548	1	30	29	0.3137	0.6178	-1.1094	0.9173	-0.2091	0	0.8795
326	0.6548	1	30	29	0.3137	0.6499	-0.9894	0.9386	-0.1291	0	0.9085
327	0.6548	1	30	29	0.3137	1.1666	0.5612	0.9873	0.051	0	0.7119
328	0.6548	1	30	29	0.3137	0.6829	-0.8693	0.8415	-0.5092	0	0.852
329	0.6548	1	30	29	0.3137	1.1209	0.4411	1.2615	0.9613	0	0.9299
330	0.6548	1	30	29	0.3137	0.6311	-1.0594	1.175	0.6912	0	0.8857
331	0.6548	1	30	29	0.3137	0.7979	-0.4792	0.9621	-0.049	0	0.9121
332	0.7544	1	30	30	0.3174	0.6731	-0.9093	1.1797	0.6812	0	0.8975
333	0.7544	1	30	30	0.3174	0.7312	-0.6993	1.1227	0.5011	0	0.881
334	0.7544	1	30	30	0.3174	0.9885	0.091	1.3598	1.2014	0	0.8748
335	0.7544	1	30	30	0.3174	0.574	-1.2894	0.8486	-0.4492	0	0.914
336	0.7544	1	30	30	0.3174	0.8953	-0.1791	0.7863	-0.6892	0	0.809
337	0.7544	1	30	30	0.3174	0.5142	-1.5295	0.5604	-1.6994	0	0.8693
338	0.7544	1	30	30	0.3174	1.2007	0.6412	1.2959	1.0213	0	0.7427
339	0.7544	1	30	30	0.3174	1.3879	1.0814	1.8436	2.4118	0	0.9064
340	0.7544	1	30	30	0.3174	0.708	-0.7793	1.1488	0.5811	0	0.8895
341	0.7544	1	30	30	0.3174	0.9292	-0.0791	1.1221	0.5011	0	0.9152
342	0.7544	1	30	30	0.3174	0.4508	-1.8195	0.6471	-1.2794	0	0.915
343	0.7544	1	30	30	0.3174	1.1234	0.4511	1.213	0.7812	0	0.8126
344	0.7544	1	30	30	0.3174	0.9686	0.031	1.1304	0.5211	0	0.8619
345	0.8564	1	30	31	0.3216	0.9281	-0.0791	0.9474	-0.0691	0	0.8344
346	0.8564	1	30	31	0.3216	0.6985	-0.8193	0.672	-1.0893	0	0.9003
347	0.8564	1	30	31	0.3216	1.0291	0.201	0.8689	-0.3391	0	0.861
348	0.8564	1	30	31	0.3216	0.606	-1.1594	0.7123	-0.9293	0	0.8726
349	0.8564	1	30	31	0.3216	1.048	0.251	0.7299	-0.8593	0	0.8875
350	0.8564	1	30	31	0.3216	0.7757	-0.5592	0.6085	-1.3694	0	0.9202
351	0.8564	1	30	31	0.3216	0.9082	-0.1391	0.9488	-0.0591	0	0.8948
352	0.8564	1	30	31	0.3216	1.0057	0.141	0.7464	-0.7893	0	0.9268
353	0.8564	1	30	31	0.3216	0.7221	-0.7393	1.0462	0.251	0	0.8835
354	0.8564	1	30	31	0.3216	0.6191	-1.1094	0.5366	-1.6995	0	0.8842
355	0.8564	1	30	31	0.3216	0.7236	-0.7293	0.6136	-1.3394	0	0.8596
356	0.8564	1	30	31	0.3216	0.7654	-0.5892	0.9622	-0.019	0	0.9034
357	0.8564	1	30	31	0.3216	1.0109	0.151	0.8533	-0.3891	0	0.8633
358	0.8564	1	30	31	0.3216	2.3101	2.8023	1.563	1.6516	0	0.6483
359	0.8564	1	30	31	0.3216	1.1435	0.5011	1.3632	1.1514	0	0.9113
360	0.8564	1	30	31	0.3216	1.6374	1.6116	1.4133	1.2814	0	0.876
361	0.8564	1	30	31	0.3216	0.5176	-1.5195	0.5379	-1.6995	0	0.8956
362	0.8564	1	30	31	0.3216	0.5355	-1.4395	0.5448	-1.6595	0	0.9527
363	0.8564	1	30	31	0.3216	1.0777	0.3311	1.2811	0.9313	0	0.8134
364	0.8564	1	30	31	0.3216	0.5744	-1.2794	0.7042	-0.9593	0	0.9022
365	0.8564	1	30	31	0.3216	0.6617	-0.9493	0.6177	-1.3294	0	0.8882
366	0.8564	1	30	31	0.3216	0.974	0.051	0.6266	-1.2894	0	0.8884
367	0.9614	1	30	32	0.3265	0.9326	-0.0691	1.0433	0.241	0	0.8965
368	0.9614	1	30	32	0.3265	0.8001	-0.4692	1.0102	0.141	0	0.929
369	0.9614	1	30	32	0.3265	0.7587	-0.6092	0.8645	-0.3191	0	0.9195
370	0.9614	1	30	32	0.3265	0.9314	-0.0691	0.7033	-0.8893	0	0.8062
371	0.9614	1	30	32	0.3265	0.7547	-0.6192	0.9365	-0.0891	0	0.8979
372	0.9614	1	30	32	0.3265	0.7116	-0.7693	1.2561	0.8313	0	0.932
373	0.9614	1	30	32	0.3265	0.5913	-1.2094	0.5947	-1.3294	0	0.886
374	0.9614	1	30	32	0.3265	0.4553	-1.7995	0.6994	-0.9093	0	0.9257
375	0.9614	1	30	32	0.3265	1.0041	0.131	0.8454	-0.3792	0	0.9693
376	0.9614	1	30	32	0.3265	0.364	-2.2596	0.4338	-2.0896	0	0.935
377	0.9614	1	30	32	0.3265	1.1202	0.4411	0.8681	-0.3091	0	0.803
378	0.9614	1	30	32	0.3265	1.4243	1.1614	1.6835	1.8317	0	0.8971
379	1.0698	1	30	33	0.3321	0.9489	-0.0191	1.4764	1.3015	0	0.8852
380	1.0698	1	30	33	0.3321	1.8553	2.0119	1.818	1.9918	0	0.8427
381	1.0698	1	30	33	0.3321	0.8827	-0.2191	1.1854	0.6112	0	0.8678
382	1.0698	1	30	33	0.3321	0.7502	-0.6292	1.1265	0.4611	0	0.9173
383	1.0698	1	30	33	0.3321	1.0721	0.3211	1.478	1.3015	0	0.8971
384	1.0698	1	30	33	0.3321	1.2528	0.7713	1.0285	0.201	0	0.8389
385	1.0698	1	30	33	0.3321	0.7771	-0.5492	0.9859	0.081	0	0.9326
386	1.0698	1	30	33	0.3321	1.1659	0.5512	0.8762	-0.2491	0	0.903
387	1.0698	1	30	33	0.3321	0.6379	-1.0294	0.9518	-0.019	0	0.919
388	1.0698	1	30	33	0.3321	0.7469	-0.6393	0.5879	-1.2594	0	0.8703
389	1.0698	1	30	33	0.3321	1.2988	0.8713	1.4761	1.3015	0	0.8808
390	1.0698	1	30	33	0.3321	1.3782	1.0514	1.1397	0.5011	0	0.7627
391	1.0698	1	30	33	0.3321	0.9266	-0.0891	0.9252	-0.0991	0	0.8486
392	1.1822	1	30	34	0.3387	1.1543	0.5212	0.9453	-0.0191	0	0.87
393	1.1822	1	30	34	0.3387	1.2836	0.8313	1.4435	1.1614	0	0.8316
394	1.1822	1	30	34	0.3387	0.7036	-0.7793	0.5354	-1.3695	0	0.8891
395	1.1822	1	30	34	0.3387	2.0201	2.282	1.8616	1.9619	0	0.8148

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.Z	STD	DISPLACE
396	1.1822	1	30	34	0.3387	0.674	-0.8893	0.689	-0.7993	0	0.9153
397	1.1822	1	30	34	0.3387	0.9655	0.031	1.1781	0.5712	0	0.9073
398	1.1822	1	30	34	0.3387	2.1696	2.5322	0.8364	-0.3292	0	0.6749
399	1.1822	1	30	34	0.3387	0.8854	-0.1991	1.4532	1.1815	0	0.8782
400	1.1822	1	30	34	0.3387	0.8304	-0.3692	0.6145	-1.0694	0	0.8755
401	1.1822	1	30	34	0.3387	0.9929	0.101	1.3173	0.8913	0	0.8386
402	1.1822	1	30	34	0.3387	0.7061	-0.7693	0.543	-1.3395	0	0.9062
403	1.1822	1	30	34	0.3387	0.9167	-0.1091	1.8467	1.9318	0	0.9388
404	1.1822	1	30	34	0.3387	1.1104	0.4111	1.3469	0.9613	0	0.8892
405	1.1822	1	30	34	0.3387	0.5734	-1.2594	0.538	-1.3595	0	0.9191
406	1.1822	1	30	34	0.3387	0.5815	-1.2294	0.7617	-0.5692	0	0.9071
407	1.1822	1	30	34	0.3387	0.8348	-0.3592	0.9952	0.111	0	0.9254
408	1.1822	1	30	34	0.3387	0.8264	-0.3792	0.8988	-0.1491	0	0.9309
409	1.1822	1	30	34	0.3387	1.0266	0.191	1.0394	0.231	0	0.8494
410	1.1822	1	30	34	0.3387	0.952	-0.009	0.5846	-1.1794	0	0.8491
411	1.1822	1	30	34	0.3387	0.8296	-0.3692	0.6219	-1.0394	0	0.8739
412	1.1822	1	30	34	0.3387	0.7652	-0.5792	0.6572	-0.9093	0	0.9211
413	1.1822	1	30	34	0.3387	0.7429	-0.6493	1.6432	1.5616	0	0.8957
414	1.2995	1	30	35	0.3464	1.2025	0.6312	1.3975	1.0114	0	0.9295
415	1.2995	1	30	35	0.3464	0.6839	-0.8293	0.9422	-0.0091	0	0.9356
416	1.2995	1	30	35	0.3464	0.7812	-0.5092	0.5698	-1.1394	0	0.8879
417	1.2995	1	30	35	0.3464	0.5471	-1.3395	1.0607	0.2811	0	0.9399
418	1.2995	1	30	35	0.3464	0.6846	-0.8293	0.523	-1.3095	0	0.9241
419	1.2995	1	30	35	0.3464	0.4914	-1.5695	0.4695	-1.5195	0	0.9511
420	1.2995	1	30	35	0.3464	1.0018	0.131	0.7043	-0.6893	0	0.8935
421	1.2995	1	30	35	0.3464	1.6609	1.6117	1.3458	0.9113	0	0.8643
422	1.2995	1	30	35	0.3464	0.7864	-0.4992	0.986	0.101	0	0.9057
423	1.2995	1	30	35	0.3464	0.6109	-1.0894	0.5198	-1.3195	0	0.9249
424	1.2995	1	30	35	0.3464	0.8422	-0.3192	1.2784	0.7713	0	0.9412
425	1.2995	1	30	35	0.3464	1.1248	0.4511	1.1047	0.3911	0	0.9327
426	1.2995	1	30	35	0.3464	0.6684	-0.8893	1.0188	0.181	0	0.9118
427	1.2995	1	30	35	0.3464	1.0504	0.2611	1.0337	0.221	0	0.8573
428	1.2995	1	30	35	0.3464	0.8446	-0.3192	0.7024	-0.6893	0	0.9141
429	1.2995	1	30	35	0.3464	1.1679	0.5512	1.2203	0.6412	0	0.855
430	1.4226	1	30	36	0.3555	0.4557	-1.6895	0.5342	-1.1595	0	0.9563
431	1.4226	1	30	36	0.3555	0.5612	-1.2494	0.4965	-1.2995	0	0.9254
432	1.4226	1	30	36	0.3555	0.4573	-1.6795	0.3997	-1.6796	0	0.948
433	1.4226	1	30	36	0.3555	1.0017	0.131	1.1147	0.4011	0	0.9135
434	1.4226	1	30	36	0.3555	0.6505	-0.9193	0.415	-1.6096	0	0.9294
435	1.4226	1	30	36	0.3555	0.6803	-0.8193	0.9147	-0.0591	0	0.9206
436	1.4226	1	30	36	0.3555	0.98	0.071	1.1897	0.5612	0	0.9347
437	1.4226	1	30	36	0.3555	0.4008	-1.9396	0.4193	-1.5996	0	0.9477
438	1.4226	1	30	36	0.3555	0.6571	-0.8993	0.63	-0.8394	0	0.9348
439	1.4226	1	30	36	0.3555	0.4791	-1.5795	0.4319	-1.5396	0	0.9445
440	1.4226	1	30	36	0.3555	0.7906	-0.4692	0.8667	-0.1791	0	0.942
441	1.4226	1	30	36	0.3555	2.9885	3.593	1.4092	0.9814	0	0.7003
442	1.4226	1	30	36	0.3555	1.0102	0.151	1.1573	0.4912	0	0.8761
443	1.4226	1	30	36	0.3555	0.8743	-0.2191	0.9941	0.131	0	0.8981
444	1.4226	1	30	36	0.3555	0.7049	-0.7393	0.5063	-1.2595	0	0.8997
445	1.4226	1	30	36	0.3555	1.1057	0.3911	2.2302	2.2722	0	0.9257
446	1.4226	1	30	36	0.3555	0.8829	-0.1891	0.9215	-0.0391	0	0.9231
447	1.4226	1	30	36	0.3555	1.3477	0.9513	1.2059	0.5912	0	0.897
448	1.5527	1	30	37	0.3662	0.8525	-0.2591	1.0489	0.261	0	0.9232
449	1.5527	1	30	37	0.3662	0.9526	0.011	0.8715	-0.1291	0	0.8989
450	1.5527	1	30	37	0.3662	0.5482	-1.2495	0.7746	-0.3692	0	0.9433
451	1.5527	1	30	37	0.3662	1.0944	0.3611	1.6107	1.2616	0	0.8907
452	1.5527	1	30	37	0.3662	0.8614	-0.2391	1.4368	0.9814	0	0.8968
453	1.5527	1	30	37	0.3662	0.6833	-0.7793	1.084	0.3311	0	0.9476
454	1.5527	1	30	37	0.3662	0.6017	-1.0594	0.5625	-0.9594	0	0.9371
455	1.5527	1	30	37	0.3662	0.605	-1.0494	0.4926	-1.1895	0	0.9402
456	1.5527	1	30	37	0.3662	0.4923	-1.4695	0.6254	-0.7694	0	0.9514
457	1.5527	1	30	37	0.3662	0.8985	-0.1391	0.8869	-0.0991	0	0.8923
458	1.5527	1	30	37	0.3662	1.0144	0.171	1.6403	1.3116	0	0.933
459	1.5527	1	30	37	0.3662	0.9926	0.111	1.316	0.7713	0	0.9257
460	1.5527	1	30	37	0.3662	1.2062	0.6212	1.3846	0.8914	0	0.877
461	1.5527	1	30	37	0.3662	0.6256	-0.9694	0.5057	-1.1495	0	0.9384
462	1.5527	1	30	37	0.3662	0.6041	-1.0494	1.3779	0.8814	0	0.9323
463	1.5527	1	30	37	0.3662	1.6244	1.4716	1.1749	0.5112	0	0.9093
464	1.6913	1	30	38	0.3789	0.7849	-0.4292	0.6712	-0.5693	0	0.9337
465	1.6913	1	30	38	0.3789	1.0804	0.3311	1.1529	0.4612	0	0.8823
466	1.6913	1	30	38	0.3789	0.689	-0.7193	0.6838	-0.5393	0	0.9215
467	1.6913	1	30	38	0.3789	0.9514	0.011	1.12	0.4011	0	0.9231
468	1.6913	1	30	38	0.3789	1.3184	0.8513	1.238	0.6112	0	0.8608
469	1.6913	1	30	38	0.3789	0.8071	-0.3692	0.5592	-0.8794	0	0.9401
470	1.6913	1	30	38	0.3789	0.84	-0.2792	0.9264	0.0209	0	0.9121
471	1.6913	1	30	38	0.3789	0.9432	-0.0091	1.8166	1.4718	0	0.9328
472	1.6913	1	30	38	0.3789	1.7217	1.6017	2.1464	1.8921	0	0.884
473	1.6913	1	30	38	0.3789	0.6029	-0.9994	0.4787	-1.1195	0	0.9339
474	1.6913	1	30	38	0.3789	0.7161	-0.6393	0.7641	-0.3392	0	0.9462
475	1.6913	1	30	38	0.3789	1.206	0.6112	1.1872	0.5212	0	0.9268

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.Z	STD	DISPLACE
476	1.6913	1	30	38	0.3789	1.0548	0.2711	0.6311	-0.6694	0	0.9132
477	1.6913	1	30	38	0.3789	0.9854	0.101	0.9721	0.111	0	0.9176
478	1.6913	1	30	38	0.3789	0.7783	-0.4492	0.7769	-0.3092	0	0.9245
479	1.6913	1	30	38	0.3789	0.7674	-0.4792	1.1611	0.4712	0	0.9308
480	1.6913	1	30	38	0.3789	0.788	-0.4292	1.449	0.9514	0	0.9369
481	1.6913	1	30	38	0.3789	0.9227	-0.0591	0.7205	-0.4393	0	0.9436
482	1.8405	1	30	39	0.3939	1.9378	1.8819	1.2821	0.6513	0	0.7977
483	1.8405	1	30	39	0.3939	1.4003	0.9814	2.2247	1.8522	0	0.894
484	1.8405	1	30	39	0.3939	0.8012	-0.3592	1.293	0.6713	0	0.9145
485	1.8405	1	30	39	0.3939	0.4726	-1.4095	0.488	-0.9795	0	0.9554
486	1.8405	1	30	39	0.3939	0.6548	-0.7793	0.5262	-0.8695	0	0.9556
487	1.8405	1	30	39	0.3939	0.5696	-1.0594	0.5721	-0.7394	0	0.9564
488	1.8405	1	30	39	0.3939	1.1301	0.4311	0.677	-0.4793	0	0.9061
489	1.8405	1	30	39	0.3939	0.9052	-0.0891	0.4688	-1.0295	0	0.8928
490	1.8405	1	30	39	0.3939	1.0664	0.2911	0.7135	-0.3993	0	0.8868
491	1.8405	1	30	39	0.3939	1.3054	0.8013	1.4818	0.9515	0	0.9152
492	1.8405	1	30	39	0.3939	1.0941	0.3611	1.7123	1.2517	0	0.9414
493	1.8405	1	30	39	0.3939	1.318	0.8213	0.933	0.0609	0	0.88
494	1.8405	1	30	39	0.3939	0.8272	-0.2892	0.7663	-0.2792	0	0.9302
495	1.8405	1	30	39	0.3939	0.8765	-0.1591	0.7116	-0.3993	0	0.9021
496	1.8405	1	30	39	0.3939	0.5398	-1.1595	0.5149	-0.8995	0	0.9642
497	2.0026	1	30	40	0.4119	0.536	-1.0995	0.4423	-0.9796	0	0.9419
498	2.0026	1	30	40	0.4119	0.9265	-0.0191	1.7268	1.1917	0	0.9387
499	2.0026	1	30	40	0.4119	0.9539	0.051	0.6066	-0.5594	0	0.9445
500	2.0026	1	30	40	0.4119	1.3881	0.9214	0.6064	-0.5594	0	0.8714
501	2.0026	1	30	40	0.4119	0.8567	-0.1891	1.1127	0.3811	0	0.9493
502	2.0026	1	30	40	0.4119	0.9419	0.0209	1.1538	0.4412	0	0.9117
503	2.0026	1	30	40	0.4119	1.5051	1.1315	1.5251	0.9515	0	0.9117
504	2.0026	1	30	40	0.4119	1.5015	1.1215	0.6527	-0.4593	0	0.8802
505	2.0026	1	30	40	0.4119	1.3302	0.8213	0.5728	-0.6394	0	0.8977
506	2.0026	1	30	40	0.4119	0.9189	-0.0391	2.3558	1.8524	0	0.9426
507	2.0026	1	30	40	0.4119	0.5486	-1.0595	0.5148	-0.7895	0	0.9585
508	2.0026	1	30	40	0.4119	1.5481	1.2015	2.9422	2.3629	0	0.8978
509	2.0026	1	30	40	0.4119	1.5487	1.2015	1.9338	1.4219	0	0.9088
510	2.0026	1	30	40	0.4119	0.5817	-0.9494	1.6098	1.0616	0	0.9219
511	2.0026	1	30	40	0.4119	1.0709	0.3011	0.9653	0.141	0	0.8974
512	2.0026	1	30	40	0.4119	1.3331	0.8213	1.1473	0.4311	0	0.878
513	2.0026	1	30	40	0.4119	1.0107	0.171	0.9977	0.201	0	0.936
514	2.0026	1	30	40	0.4119	1.0401	0.241	0.8203	-0.1192	0	0.9086
515	2.181	1	30	41	0.4333	0.8091	-0.2692	0.4473	-0.8396	0	0.9643
516	2.181	1	30	41	0.4333	0.8885	-0.0891	0.8113	-0.0792	0	0.9541
517	2.181	1	30	41	0.4333	0.6513	-0.6793	1.4711	0.8415	0	0.9393
518	2.181	1	30	41	0.4333	1.2446	0.6412	1.5293	0.9115	0	0.896
519	2.181	1	30	41	0.4333	0.6923	-0.5693	0.5393	-0.6195	0	0.9271
520	2.181	1	30	41	0.4333	1.4708	1.0215	0.7421	-0.2093	0	0.9338
521	2.181	1	30	41	0.4333	0.7361	-0.4493	0.7588	-0.1692	0	0.9313
522	2.181	1	30	41	0.4333	0.7611	-0.3892	2.7351	2.0227	0	0.9433
523	2.181	1	30	41	0.4333	0.8395	-0.1992	0.9383	0.1309	0	0.9218
524	2.181	1	30	41	0.4333	0.779	-0.3492	0.5202	-0.6595	0	0.9347
525	2.181	1	30	41	0.4333	1.711	1.4017	3.1848	2.3532	0	0.8483
526	2.181	1	30	41	0.4333	0.7119	-0.5193	0.2963	-1.2797	0	0.9685
527	2.181	1	30	41	0.4333	0.8542	-0.1591	0.934	0.1209	0	0.9414
528	2.181	1	30	41	0.4333	1.3555	0.8314	1.5819	0.9716	0	0.8916
529	2.181	1	30	41	0.4333	0.5684	-0.9294	0.4491	-0.8296	0	0.9681
530	2.181	1	30	41	0.4333	0.6135	-0.7894	0.4969	-0.7195	0	0.9647
531	2.3798	1	30	42	0.4591	1.0352	0.241	1.3327	0.6513	0	0.9106
532	2.3798	1	30	42	0.4591	0.6766	-0.5493	0.4412	-0.7196	0	0.9426
533	2.3798	1	30	42	0.4591	1.2971	0.7113	1.7237	1.0517	0	0.9196
534	2.3798	1	30	42	0.4591	0.9444	0.0609	0.3704	-0.8896	0	0.9643
535	2.3798	1	30	42	0.4591	0.4918	-1.0795	0.4294	-0.7496	0	0.9627
536	2.3798	1	30	42	0.4591	0.604	-0.7494	1.663	1.0017	0	0.9555
537	2.3798	1	30	42	0.4591	1.1313	0.4211	1.5003	0.8315	0	0.9249
538	2.3798	1	30	42	0.4591	0.7625	-0.3392	1.2912	0.6113	0	0.9398
539	2.3798	1	30	42	0.4591	0.7262	-0.4293	0.5209	-0.5395	0	0.9337
540	2.3798	1	30	42	0.4591	0.5057	-1.0395	0.4425	-0.7196	0	0.9618
541	2.3798	1	30	42	0.4591	0.5191	-0.9895	0.6804	-0.2393	0	0.9576
542	2.6047	1	30	43	0.4901	0.649	-0.5594	2.061	1.2621	0	0.9393
543	2.6047	1	30	43	0.4901	0.6893	-0.4593	0.815	0.0408	0	0.9425
544	2.6047	1	30	43	0.4901	0.6811	-0.4793	1.4402	0.7414	0	0.9369
545	2.6047	1	30	43	0.4901	1.2683	0.6413	2.0373	1.242	0	0.8977
546	2.6047	1	30	43	0.4901	0.8152	-0.1792	0.6584	-0.1893	0	0.9426
547	2.6047	1	30	43	0.4901	0.7302	-0.3693	0.4519	-0.5595	0	0.9619
548	2.6047	1	30	43	0.4901	0.5809	-0.7294	0.5175	-0.4295	0	0.9629
549	2.6047	1	30	43	0.4901	0.6427	-0.5694	0.2469	-1.0598	0	0.9696
550	2.6047	1	30	43	0.4901	1.2337	0.5812	2.4344	1.5224	0	0.9092
551	2.6047	1	30	43	0.4901	1.2895	0.6713	0.7023	-0.1193	0	0.9205
552	2.6047	1	30	43	0.4901	0.9113	0.0109	0.7688	-0.0192	0	0.9443
553	2.6047	1	30	43	0.4901	0.7994	-0.2092	0.5882	-0.2994	0	0.9444
554	2.6047	1	30	43	0.4901	0.5217	-0.8895	0.4148	-0.6296	0	0.9565
555	2.6047	1	30	43	0.4901	1.6564	1.1917	1.4785	0.7815	0	0.8932

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.Z	STD	DISPLACE
556	2.6047	1	30	43	0.4901	1.5577	1.0616	1.8319	1.0818	0	0.9019
557	2.6047	1	30	43	0.4901	1.5209	1.0115	1.1519	0.4512	0	0.9084
558	2.6047	1	30	43	0.4901	0.5813	-0.7294	0.5047	-0.4495	0	0.926
559	2.8628	1	30	44	0.527	1.117	0.3911	0.2523	-0.8397	0	0.9679
560	2.8628	1	30	44	0.527	3.107	2.5331	1.8351	1.0218	0	0.8685
561	2.8628	1	30	44	0.527	0.8163	-0.1292	1.2417	0.5512	0	0.93
562	2.8628	1	30	44	0.527	0.7382	-0.2893	0.3463	-0.6097	0	0.9553
563	2.8628	1	30	44	0.527	1.4394	0.8514	0.6214	-0.1394	0	0.9427
564	2.8628	1	30	44	0.527	0.5489	-0.7195	0.6079	-0.1594	0	0.9471
565	2.8628	1	30	44	0.527	0.732	-0.2993	0.2262	-0.9098	0	0.9397
566	2.8628	1	30	44	0.527	0.7382	-0.2893	0.3463	-0.6097	0	0.9553
567	2.8628	1	30	44	0.527	0.5226	-0.7895	0.9721	0.291	0	0.9455
568	2.8628	1	30	44	0.527	0.5367	-0.7495	2.3779	1.3724	0	0.9405
569	3.1634	1	30	45	0.5702	0.4919	-0.7595	2.221	1.1922	0	0.9389
570	3.1634	1	30	45	0.5702	0.5637	-0.5894	0.139	-0.9199	0	0.97
571	3.1634	1	30	45	0.5702	0.3789	-1.0696	0.2095	-0.7198	0	0.955
572	3.1634	1	30	45	0.5702	0.6312	-0.4394	1.8539	0.9919	0	0.9281
573	3.1634	1	30	45	0.5702	1.1211	0.4011	1.004	0.381	0	0.9096
574	3.5167	1	30	46	0.6192	0.8308	-0.0192	0.6682	0.1707	0	0.9123
575	3.5167	1	30	46	0.6192	0.3474	-1.0297	0.2466	-0.3898	0	0.9397
576	3.5167	1	30	46	0.6192	0.4473	-0.7696	3.2575	1.5333	0	0.9238
577	3.5167	1	30	46	0.6192	0.3912	-0.9096	0.0775	-0.8399	0	0.9532
578	3.5167	1	30	46	0.6192	0.3474	-1.0297	0.2466	-0.3898	0	0.9397
579	3.5167	1	30	46	0.6192	1.6369	1.0016	0.2042	-0.4698	0	0.9192
580	3.5167	1	30	46	0.6192	0.8794	0.0609	2.6257	1.3026	0	0.9024
581	3.5167	1	30	46	0.6192	0.4382	-0.7896	1.5122	0.7815	0	0.9278
582	3.5167	1	30	46	0.6192	0.6793	-0.2793	0.1528	-0.5898	0	0.9523
583	3.5167	1	30	46	0.6192	2.6789	1.8927	1.4349	0.7314	0	0.8674
584	3.5167	1	30	46	0.6192	2.6231	1.8526	0.9958	0.441	0	0.8475
585	3.9352	1	30	47	0.6763	0.9496	0.1809	0.1089	-0.6399	0	0.9225
586	3.9352	1	30	47	0.6763	0.9496	0.1809	0.1089	-0.6399	0	0.9225
587	3.9352	1	30	47	0.6763	0.1745	-1.5498	0.0508	-0.8599	0	0.938
588	3.9352	1	30	47	0.6763	2.1813	1.4522	1.0473	0.501	0	0.869
589	3.9352	1	30	47	0.6763	0.5605	-0.4694	0.36	-0.1396	0	0.9126
590	3.9352	1	30	47	0.6763	1.2287	0.5312	0.2265	-0.3598	0	0.9179
591	4.4477	1	30	48	0.7644	0.2758	-1.0697	0.0676	-0.7899	0	0.9071
592	4.4477	1	30	48	0.7644	0.6694	-0.2193	4.1603	1.7642	0	0.8752
593	4.4477	1	30	48	0.7644	0.487	-0.5495	0.0552	-0.8399	0	0.91
594	5.1882	1	30	49	1.0004	0.2114	-0.7298	0.0243	-1.04	0	0.8837
595	5.1882	1	30	49	1.0004	1.3567	0.6614	3.3493	1.5233	0	0.8088
596	5.1882	1	30	49	1.0004	1.3559	0.6614	3.2565	1.4933	0	0.8451
597	5.1882	1	30	49	1.0004	0.2114	-0.7298	0.0243	-1.04	0	0.8837
598	5.1882	1	30	49	1.0004	0.2114	-0.7298	0.0243	-1.04	0	0.8837

Appendix B: Listening examinees measurement report (arranged by N)

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.ZSTD	
1	-5.3968	1	30	2	0.818	0.8513	-0.0991	0.3869	-0.0996	0
2	-3.3833	1	30	7	0.5361	2.3379	3.8123	5.9063	2.9459	0
3	-2.3362	1	30	11	0.4966	1.1681	0.7112	1.3853	0.8014	0
4	-2.0912	1	30	12	0.4936	2.3793	3.8624	2.4757	2.2225	0
5	-1.6076	1	30	14	0.4902	1.924	2.6219	1.5703	1.1816	0
6	-1.1301	1	30	16	0.4868	1.8595	2.3819	1.9391	1.6319	0
7	-0.8942	1	30	17	0.4845	1.1495	0.5711	0.925	0.0409	0
8	-0.8942	1	30	17	0.4845	0.8747	-0.3291	0.7183	-0.3893	0
9	-0.8942	1	30	17	0.4845	0.5762	-1.5594	0.4385	-1.1396	0
10	-0.8942	1	30	17	0.4845	0.8599	-0.3891	0.6903	-0.4593	0
11	-0.8942	1	30	17	0.4845	1.2139	0.7612	1.1089	0.3711	0
12	-0.6608	1	30	18	0.4818	0.6949	-1.0493	0.5196	-0.7795	0
13	-0.6608	1	30	18	0.4818	1.5444	1.6715	1.1477	0.4411	0
14	-0.4299	1	30	19	0.4792	2.3239	3.4323	2.4609	1.8025	0
15	-0.4299	1	30	19	0.4792	0.7506	-0.8392	0.4867	-0.7395	0
16	-0.4299	1	30	19	0.4792	1.0178	0.161	1.1154	0.3911	0
17	-0.4299	1	30	19	0.4792	0.9489	-0.0791	0.757	-0.1792	0
18	-0.4299	1	30	19	0.4792	1.2854	0.9913	1.3202	0.6613	0
19	-0.4299	1	30	19	0.4792	1.3041	1.0513	1.2764	0.6013	0
20	-0.2013	1	30	20	0.477	0.8608	-0.4191	0.6165	-0.3594	0
21	-0.2013	1	30	20	0.477	0.9117	-0.2291	0.7141	-0.1793	0
22	-0.2013	1	30	20	0.477	1.0667	0.3211	0.6153	-0.3594	0
23	-0.2013	1	30	20	0.477	0.7598	-0.8292	0.5979	-0.3894	0
24	-0.2013	1	30	20	0.477	1.14	0.5711	0.6285	-0.3294	0
25	0.0256	1	30	21	0.4759	0.8282	-0.5692	0.5056	-0.4595	0
26	0.0256	1	30	21	0.4759	0.962	-0.049	0.6292	-0.2394	0
27	0.0256	1	30	21	0.4759	1.003	0.101	1.0309	0.311	0
28	0.2521	1	30	22	0.4763	0.789	-0.7592	0.4507	-0.4395	0
29	0.2521	1	30	22	0.4763	1.136	0.5811	0.6469	-0.1294	0
30	0.2521	1	30	22	0.4763	1.1736	0.7012	0.6629	-0.0993	0
31	0.2521	1	30	22	0.4763	1.0224	0.171	1.5275	0.8015	0
32	0.2521	1	30	22	0.4763	1.1834	0.7412	0.724	-0.0193	0
33	0.2521	1	30	22	0.4763	0.7441	-0.9593	0.4363	-0.4696	0
34	0.2521	1	30	22	0.4763	1.444	1.5514	1.0363	0.351	0
35	0.2521	1	30	22	0.4763	0.9777	0.011	0.6042	-0.1894	0
36	0.2521	1	30	22	0.4763	1.0614	0.3111	0.9799	0.291	0
37	0.2521	1	30	22	0.4763	0.8568	-0.4691	0.589	-0.2094	0
38	0.2521	1	30	22	0.4763	1.4161	1.4714	1.1028	0.4211	0
39	0.48	1	30	23	0.4789	0.9746	-0.009	0.8939	0.2109	0
40	0.48	1	30	23	0.4789	0.9858	0.031	0.5403	-0.2395	0
41	0.48	1	30	23	0.4789	0.6336	-1.5194	0.4209	-0.4396	0
42	0.48	1	30	23	0.4789	1.1741	0.7112	0.6411	-0.0994	0
43	0.48	1	30	23	0.4789	0.939	-0.1491	0.527	-0.2595	0
44	0.48	1	30	23	0.4789	0.9457	-0.1191	0.5718	-0.1994	0
45	0.48	1	30	23	0.4789	0.974	-0.009	0.5803	-0.1794	0
46	0.48	1	30	23	0.4789	0.6296	-1.5394	0.4141	-0.4596	0
47	0.48	1	30	23	0.4789	1.1169	0.5111	1.8593	1.0319	0
48	0.48	1	30	23	0.4789	1.2648	1.0113	1.008	0.331	0
49	0.48	1	30	23	0.4789	1.2677	1.0213	0.7394	0.0307	0
50	0.48	1	30	23	0.4789	1.193	0.7812	0.9645	0.291	0
51	0.48	1	30	23	0.4789	0.9607	-0.059	0.6155	-0.1294	0
52	0.7117	1	30	24	0.4842	0.899	-0.3091	0.495	-0.2595	0
53	0.7117	1	30	24	0.4842	0.7012	-1.1793	0.4024	-0.4096	0
54	0.7117	1	30	24	0.4842	1.105	0.4711	0.9292	0.2809	0
55	0.7117	1	30	24	0.4842	0.8684	-0.4291	0.5365	-0.1995	0
56	0.7117	1	30	24	0.4842	0.8994	-0.3091	0.5447	-0.1795	0
57	0.7117	1	30	24	0.4842	1.0535	0.2911	1.1469	0.4811	0
58	0.7117	1	30	24	0.4842	0.7779	-0.8192	0.4484	-0.3296	0
59	0.9501	1	30	25	0.4931	1.0952	0.4311	1.965	1.052	0
60	0.9501	1	30	25	0.4931	0.8787	-0.3791	0.4359	-0.2696	0
61	0.9501	1	30	25	0.4931	0.5436	-1.9495	0.321	-0.4597	0
62	0.9501	1	30	25	0.4931	0.9225	-0.1991	0.6282	-0.0094	0
63	0.9501	1	30	25	0.4931	0.9299	-0.1691	0.471	-0.2195	0
64	0.9501	1	30	25	0.4931	0.5926	-1.6794	0.3517	-0.4096	0
65	0.9501	1	30	25	0.4931	0.6448	-1.4194	0.3812	-0.3596	0
66	0.9501	1	30	25	0.4931	1.1376	0.5811	2.6612	1.4027	0
67	0.9501	1	30	25	0.4931	1.4223	1.4714	0.7393	0.1207	0
68	0.9501	1	30	25	0.4931	0.5875	-1.7094	0.3482	-0.4097	0
69	0.9501	1	30	25	0.4931	0.5154	-2.1095	0.3047	-0.4997	0
70	0.9501	1	30	25	0.4931	1.1342	0.5711	1.1569	0.5112	0
71	0.9501	1	30	25	0.4931	1.0298	0.201	0.5219	-0.1395	0
72	0.9501	1	30	25	0.4931	0.771	-0.8292	0.4171	-0.2996	0
73	0.9501	1	30	25	0.4931	0.8566	-0.4691	0.421	-0.2896	0
74	0.9501	1	30	25	0.4931	1.0642	0.3211	0.6103	-0.0294	0
75	1.1995	1	30	26	0.5065	1.0012	0.101	0.4613	-0.1295	0

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.ZSTD	
76	1.1995	1	30	26	0.5065	0.9701	-0.009	0.4617	-0.1295	0
77	1.1995	1	30	26	0.5065	0.7102	-1.0393	0.3457	-0.3097	0
78	1.1995	1	30	26	0.5065	1.0756	0.3511	0.5088	-0.0695	0
79	1.1995	1	30	26	0.5065	0.6972	-1.0993	0.3656	-0.2696	0
80	1.1995	1	30	26	0.5065	0.8319	-0.5292	3.0443	1.503	0
81	1.1995	1	30	26	0.5065	0.9013	-0.2591	0.4329	-0.1696	0
82	1.1995	1	30	26	0.5065	0.9326	-0.1491	1.1303	0.5111	0
83	1.1995	1	30	26	0.5065	0.9574	-0.059	1.4138	0.7114	0
84	1.1995	1	30	26	0.5065	0.6972	-1.0993	0.3656	-0.2696	0
85	1.1995	1	30	26	0.5065	1.2387	0.8712	0.572	0.0006	0
86	1.1995	1	30	26	0.5065	1.0375	0.221	1.2239	0.5812	0
87	1.1995	1	30	26	0.5065	0.9521	-0.079	0.4509	-0.1495	0
88	1.1995	1	30	26	0.5065	0.4686	-2.2595	0.2642	-0.4497	0
89	1.4654	1	30	27	0.5261	0.8176	-0.5292	0.5891	0.0506	0
90	1.4654	1	30	27	0.5261	1.0349	0.211	0.4822	-0.0695	0
91	1.4654	1	30	27	0.5261	1.0532	0.2711	1.4309	0.7214	0
92	1.4654	1	30	27	0.5261	1.0715	0.3311	0.6538	0.1207	0
93	1.4654	1	30	27	0.5261	0.9046	-0.2191	0.4131	-0.1696	0
94	1.4654	1	30	27	0.5261	0.9515	-0.059	0.4271	-0.1496	0
95	1.4654	1	30	27	0.5261	1.0636	0.3011	1.3568	0.6814	0
96	1.4654	1	30	27	0.5261	0.9515	-0.059	0.4271	-0.1496	0
97	1.4654	1	30	27	0.5261	0.524	-1.7895	0.2786	-0.3797	0
98	1.7564	1	30	28	0.5543	0.9322	-0.0891	0.4201	-0.1096	0
99	1.7564	1	30	28	0.5543	0.6245	-1.1594	0.3076	-0.2697	0
100	1.7564	1	30	28	0.5543	0.6925	-0.8993	0.3546	-0.1996	0
101	1.7564	1	30	28	0.5543	0.7275	-0.7693	0.3991	-0.1296	0
102	1.7564	1	30	28	0.5543	1.0941	0.3811	0.5227	0.0205	0
103	1.7564	1	30	28	0.5543	1.072	0.3211	0.4596	-0.0595	0
104	1.7564	1	30	28	0.5543	1.0311	0.201	0.7199	0.2207	0
105	1.7564	1	30	28	0.5543	0.9641	0.011	0.4491	-0.0696	0
106	1.7564	1	30	28	0.5543	0.7065	-0.8493	0.3728	-0.1696	0
107	2.0858	1	30	29	0.5961	1.2015	0.6212	0.9314	0.4209	0
108	2.0858	1	30	29	0.5961	1.0533	0.2611	0.5167	0.0505	0
109	2.0858	1	30	29	0.5961	1.0577	0.2811	0.5348	0.0705	0
110	2.0858	1	30	29	0.5961	0.9971	0.121	0.5089	0.0405	0
111	2.0858	1	30	29	0.5961	0.6202	-0.9994	0.2928	-0.2397	0
112	2.0858	1	30	29	0.5961	0.6311	-0.9594	0.3066	-0.2197	0
113	2.0858	1	30	29	0.5961	0.7507	-0.5692	0.4065	-0.0796	0
114	2.4781	1	30	30	0.6614	0.9321	0.0009	0.4085	-0.0796	0
115	2.4781	1	30	30	0.6614	0.9757	0.101	0.5293	0.0705	0
116	2.4781	1	30	30	0.6614	0.9757	0.101	0.5293	0.0705	0
117	2.4781	1	30	30	0.6614	0.9198	-0.0191	0.4389	-0.0396	0
118	2.4781	1	30	30	0.6614	0.6583	-0.6893	0.315	-0.2097	0
119	2.4781	1	30	30	0.6614	0.9251	-0.0091	0.4247	-0.0596	0
120	2.4781	1	30	30	0.6614	1.0116	0.181	0.5195	0.0605	0
121	2.9874	1	30	31	0.7769	0.8849	-0.0091	0.4297	-0.0496	0
122	2.9874	1	30	31	0.7769	1.1922	0.5012	0.6182	0.1606	0
123	2.9874	1	30	31	0.7769	0.8984	0.0209	0.479	0.0105	0
124	2.9874	1	30	31	0.7769	1.2057	0.5212	0.6675	0.2007	0
125	3.784	1	30	32	1.0504	1.0881	0.3911	0.5228	0.0605	0
126	-2.435	1	30	8	0.5053	2.3499	3.2824	2.8082	2.5728	0
127	-2.435	1	30	8	0.5053	1.2218	0.7712	2.4783	2.2425	0
128	-2.1902	1	30	9	0.4848	1.7293	2.1717	1.9369	1.7719	0
129	-2.1902	1	30	9	0.4848	1.4843	1.5515	2.457	2.4525	0
130	-1.7514	1	30	11	0.4538	1.3763	1.4014	1.5689	1.3816	0
131	-1.5508	1	30	12	0.4423	1.2277	0.9512	1.4157	1.1214	0
132	-1.5508	1	30	12	0.4423	1.0914	0.4511	0.9179	-0.0991	0
133	-1.3594	1	30	13	0.4329	1.11	0.5311	1.1687	0.5612	0
134	-1.1753	1	30	14	0.4255	1.1321	0.6311	1.3795	1.0414	0
135	-1.1753	1	30	14	0.4255	1.0898	0.4611	1.6878	1.6717	0
136	-1.1753	1	30	14	0.4255	1.1268	0.6111	1.045	0.241	0
137	-1.1753	1	30	14	0.4255	1.2962	1.2713	1.3347	0.9413	0
138	-0.9969	1	30	15	0.4196	1.616	2.4216	1.4821	1.2315	0
139	-0.9969	1	30	15	0.4196	1.1134	0.5711	1.093	0.3611	0
140	-0.9969	1	30	15	0.4196	1.0851	0.4511	1.0535	0.2711	0
141	-0.9969	1	30	15	0.4196	1.3536	1.5114	1.3821	1.0214	0
142	-0.9969	1	30	15	0.4196	1.2795	1.2313	1.2917	0.8313	0
143	-0.8227	1	30	16	0.4153	1.2881	1.2913	0.9847	0.091	0
144	-0.8227	1	30	16	0.4153	0.7616	-1.1192	0.6641	-0.8193	0
145	-0.8227	1	30	16	0.4153	0.845	-0.6792	0.7721	-0.4892	0
146	-0.8227	1	30	16	0.4153	0.9178	-0.3191	0.7882	-0.4392	0
147	-0.8227	1	30	16	0.4153	0.9302	-0.2591	0.8105	-0.3692	0
148	-0.8227	1	30	16	0.4153	1.2639	1.1913	1.0677	0.3011	0
149	-0.8227	1	30	16	0.4153	1.0742	0.4111	0.9092	-0.0991	0
150	-0.6514	1	30	17	0.4125	1.5071	2.1115	1.1886	0.5612	0
151	-0.6514	1	30	17	0.4125	1.0029	0.091	0.8598	-0.1991	0
152	-0.6514	1	30	17	0.4125	1.3366	1.4813	1.0958	0.3611	0
153	-0.6514	1	30	17	0.4125	0.9916	0.031	0.8986	-0.1091	0
154	-0.6514	1	30	17	0.4125	0.698	-1.4993	0.9322	-0.0191	0
155	-0.6514	1	30	17	0.4125	1.4019	1.7314	1.5632	1.2716	0

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.ZSTD	
156	-0.6514	1	30	17	0.4125	0.8931	-0.4391	0.8381	-0.2592	0
157	-0.6514	1	30	17	0.4125	0.8876	-0.4691	0.7988	-0.3692	0
158	-0.6514	1	30	17	0.4125	1.0939	0.4911	1.0408	0.241	0
159	-0.6514	1	30	17	0.4125	1.1396	0.6911	0.9143	-0.0691	0
160	-0.6514	1	30	17	0.4125	0.8902	-0.4591	0.8056	-0.3492	0
161	-0.6514	1	30	17	0.4125	0.9844	0.001	0.8274	-0.2892	0
162	-0.482	1	30	18	0.411	0.8197	-0.8292	0.7531	-0.4392	0
163	-0.482	1	30	18	0.411	1.1936	0.9212	1.1388	0.4411	0
164	-0.482	1	30	18	0.411	1.5847	2.3916	1.324	0.8013	0
165	-0.482	1	30	18	0.411	1.0603	0.3511	1.7634	1.5218	0
166	-0.482	1	30	18	0.411	1.489	2.0615	1.2895	0.7313	0
167	-0.482	1	30	18	0.411	0.7231	-1.3593	0.7147	-0.5393	0
168	-0.482	1	30	18	0.411	0.7747	-1.0692	0.7187	-0.5293	0
169	-0.482	1	30	18	0.411	1.1015	0.5311	0.7948	-0.3292	0
170	-0.3132	1	30	19	0.4109	1.3084	1.3813	1.8855	1.5919	0
171	-0.3132	1	30	19	0.4109	0.9266	-0.2791	0.7745	-0.3292	0
172	-0.3132	1	30	19	0.4109	0.8363	-0.7392	0.6683	-0.5993	0
173	-0.3132	1	30	19	0.4109	1.2359	1.1012	1.0986	0.3611	0
174	-0.3132	1	30	19	0.4109	0.8388	-0.7292	0.7208	-0.4593	0
175	-0.144	1	30	20	0.4122	1.0374	0.241	0.9044	0.0009	0
176	-0.144	1	30	20	0.4122	1.5567	2.2916	1.4646	0.9415	0
177	-0.144	1	30	20	0.4122	0.8977	-0.4191	0.7243	-0.3893	0
178	-0.144	1	30	20	0.4122	1.3806	1.6514	1.1564	0.4612	0
179	0.027	1	30	21	0.4151	0.9177	-0.3191	0.7886	-0.1892	0
180	0.027	1	30	21	0.4151	1.011	0.121	0.8107	-0.1492	0
181	0.027	1	30	21	0.4151	1.0093	0.111	0.8273	-0.1192	0
182	0.027	1	30	21	0.4151	0.8652	-0.5791	0.7263	-0.3193	0
183	0.027	1	30	21	0.4151	1.0399	0.251	1.0005	0.201	0
184	0.027	1	30	21	0.4151	0.8984	-0.4091	0.7293	-0.3193	0
185	0.027	1	30	21	0.4151	0.8728	-0.5391	0.804	-0.1592	0
186	0.2012	1	30	22	0.4198	1.1201	0.6011	0.8785	0.0209	0
187	0.2012	1	30	22	0.4198	1.3413	1.4713	1.7084	1.1317	0
188	0.2012	1	30	22	0.4198	0.6285	-1.8794	0.4656	-0.8395	0
189	0.2012	1	30	22	0.4198	1.0605	0.3411	0.8886	0.0309	0
190	0.2012	1	30	22	0.4198	1.0154	0.141	0.7144	-0.2793	0
191	0.2012	1	30	22	0.4198	1.0881	0.4611	0.9156	0.0809	0
192	0.2012	1	30	22	0.4198	0.9737	-0.049	0.8996	0.0509	0
193	0.2012	1	30	22	0.4198	0.8948	-0.4191	0.6544	-0.3993	0
194	0.2012	1	30	22	0.4198	0.662	-1.6693	0.5874	-0.5494	0
195	0.2012	1	30	22	0.4198	0.8601	-0.5891	1.4607	0.8415	0
196	0.38	1	30	23	0.4265	0.9588	-0.109	0.6936	-0.2493	0
197	0.38	1	30	23	0.4265	0.6498	-1.6994	0.5169	-0.6095	0
198	0.38	1	30	23	0.4265	0.9944	0.051	1.975	1.322	0
199	0.38	1	30	23	0.4265	0.6776	-1.5393	0.5863	-0.4594	0
200	0.38	1	30	23	0.4265	1.3518	1.4814	1.1784	0.4712	0
201	0.38	1	30	23	0.4265	0.597	-2.0194	0.5035	-0.6395	0
202	0.38	1	30	23	0.4265	1.0722	0.3911	0.7368	-0.1793	0
203	0.5656	1	30	24	0.4356	0.5809	-2.0494	0.4259	-0.6996	0
204	0.5656	1	30	24	0.4356	0.9067	-0.3291	0.8298	0.0308	0
205	0.5656	1	30	24	0.4356	0.5809	-2.0494	0.4259	-0.6996	0
206	0.5656	1	30	24	0.4356	1.0293	0.201	0.7695	-0.0592	0
207	0.5656	1	30	24	0.4356	0.5809	-2.0494	0.4259	-0.6996	0
208	0.5656	1	30	24	0.4356	0.8078	-0.7992	0.5513	-0.4394	0
209	0.5656	1	30	24	0.4356	0.9539	-0.119	0.726	-0.1293	0
210	0.5656	1	30	24	0.4356	0.8407	-0.6392	0.5482	-0.4395	0
211	0.5656	1	30	24	0.4356	1.3014	1.2613	0.8008	-0.0192	0
212	0.5656	1	30	24	0.4356	0.9986	0.071	0.6874	-0.1993	0
213	0.5656	1	30	24	0.4356	0.638	-1.7094	0.5207	-0.4995	0
214	0.5656	1	30	24	0.4356	0.9944	0.051	0.8123	0.0008	0
215	0.5656	1	30	24	0.4356	0.5895	-1.9894	0.4762	-0.5895	0
216	0.5656	1	30	24	0.4356	1.09	0.4511	0.7838	-0.0392	0
217	0.5656	1	30	24	0.4356	1.0379	0.241	0.9657	0.211	0
218	0.5656	1	30	24	0.4356	0.8903	-0.4091	0.5728	-0.3994	0
219	0.5656	1	30	24	0.4356	0.6848	-1.4393	0.5051	-0.5295	0
220	0.5656	1	30	24	0.4356	0.8972	-0.3791	0.6836	-0.1993	0
221	0.7606	1	30	25	0.448	1.1119	0.5211	0.7562	-0.0192	0
222	0.7606	1	30	25	0.448	1.0328	0.211	0.6862	-0.1293	0
223	0.7606	1	30	25	0.448	0.7168	-1.1993	0.4685	-0.4895	0
224	0.7606	1	30	25	0.448	0.7083	-1.2393	0.5164	-0.3995	0
225	0.7606	1	30	25	0.448	1.0697	0.3611	0.7562	-0.0192	0
226	0.7606	1	30	25	0.448	0.8885	-0.3891	0.6716	-0.1493	0
227	0.7606	1	30	25	0.448	0.7154	-1.2093	0.4731	-0.4795	0
228	0.9684	1	30	26	0.4645	1.0205	0.171	0.5554	-0.2394	0
229	0.9684	1	30	26	0.4645	1.0245	0.181	0.5773	-0.1994	0
230	0.9684	1	30	26	0.4645	1.1594	0.6612	1.2793	0.5913	0
231	0.9684	1	30	26	0.4645	1.0205	0.171	0.5554	-0.2394	0
232	0.9684	1	30	26	0.4645	0.6763	-1.2993	0.4267	-0.4496	0
233	0.9684	1	30	26	0.4645	0.9756	-0.009	0.5386	-0.2595	0
234	1.1941	1	30	27	0.4867	0.8783	-0.3391	0.68	0.0207	0
235	1.1941	1	30	27	0.4867	1.0188	0.161	0.8435	0.2108	0

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.ZSTD	
236	1.1941	1	30	27	0.4867	0.7909	-0.6792	0.4864	-0.2395	0
237	1.1941	1	30	27	0.4867	0.9365	-0.1291	0.726	0.0807	0
238	1.1941	1	30	27	0.4867	1.0837	0.3811	0.7216	0.0707	0
239	1.4454	1	30	28	0.5174	0.8059	-0.5292	0.4422	-0.2796	0
240	1.4454	1	30	28	0.5174	0.8226	-0.4692	0.5534	-0.1194	0
241	1.4454	1	30	28	0.5174	0.9366	-0.0891	0.7625	0.1308	0
242	1.4454	1	30	28	0.5174	1.0462	0.251	0.6967	0.0607	0
243	1.4454	1	30	28	0.5174	0.8856	-0.2491	0.5211	-0.1595	0
244	1.7351	1	30	29	0.5616	1.0955	0.3711	1.068	0.4411	0
245	1.7351	1	30	29	0.5616	0.9972	0.121	0.596	-0.0294	0
246	2.0871	1	30	30	0.6297	1.0232	0.211	0.7334	0.1707	0
247	2.5546	1	30	31	0.749	0.9225	0.0709	0.4584	-0.0796	0
248	2.5546	1	30	31	0.749	1.0274	0.251	0.6353	0.1206	0
249	2.5546	1	30	31	0.749	1.0327	0.261	0.6525	0.1407	0
250	3.3078	1	30	32	1.0291	0.9625	0.271	0.4257	-0.0496	0
251	3.3078	1	30	32	1.0291	0.9813	0.291	0.4807	0.0105	0
252	-2.4752	1	30	8	0.4772	2.3055	4.1323	2.9553	2.773	0
253	-2.2536	1	30	9	0.4649	2.2632	4.1323	2.4949	2.5525	0
254	-1.64	1	30	12	0.4424	1.1444	0.6811	1.0645	0.3011	0
255	-1.4462	1	30	13	0.4383	1.0099	0.121	0.9992	0.101	0
256	-1.2555	1	30	14	0.4354	1.3265	1.3713	1.309	1.0313	0
257	-1.2555	1	30	14	0.4354	0.8717	-0.5091	0.7839	-0.6692	0
258	-1.2555	1	30	14	0.4354	1.6238	2.3716	1.7324	2.0917	0
259	-0.8791	1	30	16	0.4329	1.1801	0.8012	1.2895	0.9613	0
260	-0.8791	1	30	16	0.4329	1.2578	1.1013	1.683	1.9417	0
261	-0.8791	1	30	16	0.4329	0.7937	-0.8692	0.7247	-0.8793	0
262	-0.8791	1	30	16	0.4329	1.001	0.081	0.9651	-0.009	0
263	-0.6916	1	30	17	0.4332	1.6104	2.2616	1.4363	1.2914	0
264	-0.6916	1	30	17	0.4332	1.1303	0.6111	0.9758	0.031	0
265	-0.6916	1	30	17	0.4332	1.8823	3.0519	2.061	2.6221	0
266	-0.5034	1	30	18	0.4347	0.5242	-2.3395	0.4504	-1.8795	0
267	-0.5034	1	30	18	0.4347	1.2681	1.1964	1.0964	0.3811	0
268	-0.5034	1	30	18	0.4347	0.7982	-0.8192	0.7147	-0.7893	0
269	-0.5034	1	30	18	0.4347	0.864	-0.5091	1.0157	0.161	0
270	-0.5034	1	30	18	0.4347	1.0329	0.221	1.0901	0.3711	0
271	-0.3134	1	30	19	0.4373	1.0221	0.171	0.7973	-0.4392	0
272	-0.3134	1	30	19	0.4373	2.4388	4.3424	2.9255	3.5129	0
273	-0.3134	1	30	19	0.4373	1.1987	0.8512	1.0229	0.191	0
274	-0.3134	1	30	19	0.4373	2.0899	3.5121	2.3718	2.7524	0
275	-0.1205	1	30	20	0.4413	1.6136	2.1716	1.7057	1.5317	0
276	-0.1205	1	30	20	0.4413	1.1906	0.8112	1.5894	1.3316	0
277	-0.1205	1	30	20	0.4413	1.123	0.5611	0.8758	-0.1691	0
278	-0.1205	1	30	20	0.4413	1.1757	0.7512	1.0138	0.171	0
279	-0.1205	1	30	20	0.4413	1.6054	2.1516	2.28	2.3923	0
280	-0.1205	1	30	20	0.4413	1.275	1.1013	1.2442	0.6812	0
281	0.0766	1	30	21	0.4469	1.0999	0.4711	0.8609	-0.1591	0
282	0.0766	1	30	21	0.4469	0.9021	-0.3191	0.788	-0.3292	0
283	0.0766	1	30	21	0.4469	0.9344	-0.1791	1.3498	0.8313	0
284	0.0766	1	30	21	0.4469	0.5666	-1.9594	0.4473	-1.3496	0
285	0.0766	1	30	21	0.4469	0.915	-0.2591	0.6588	-0.6793	0
286	0.0766	1	30	21	0.4469	0.758	-0.9592	0.5658	-0.9494	0
287	0.0766	1	30	21	0.4469	0.6844	-1.3193	0.5982	-0.8494	0
288	0.0766	1	30	21	0.4469	0.8329	-0.6192	0.7188	-0.5093	0
289	0.0766	1	30	21	0.4469	0.7716	-0.8992	0.859	-0.1591	0
290	0.0766	1	30	21	0.4469	1.2512	1.0013	1.1201	0.4011	0
291	0.2795	1	30	22	0.4544	0.947	-0.1191	0.7163	-0.4293	0
292	0.2795	1	30	22	0.4544	1.3791	1.3914	1.6247	1.1816	0
293	0.2795	1	30	22	0.4544	0.6568	-1.4193	0.4037	-1.3296	0
294	0.2795	1	30	22	0.4544	0.9476	-0.1191	0.7605	-0.3292	0
295	0.2795	1	30	22	0.4544	0.5823	-1.8094	0.3909	-1.3696	0
296	0.2795	1	30	22	0.4544	0.7419	-0.9993	0.5117	-0.9795	0
297	0.2795	1	30	22	0.4544	1.5956	2.0316	1.2209	0.5712	0
298	0.2795	1	30	22	0.4544	0.536	-2.0795	0.4108	-1.2996	0
299	0.2795	1	30	22	0.4544	2.0171	3.122	2.1016	1.7921	0
300	0.4903	1	30	23	0.4643	0.6847	-1.2293	0.5341	-0.7695	0
301	0.4903	1	30	23	0.4643	1.248	0.9412	1.7684	1.2718	0
302	0.4903	1	30	23	0.4643	0.571	-1.8094	0.3672	-1.2596	0
303	0.4903	1	30	23	0.4643	1.1445	0.6011	0.7722	-0.2292	0
304	0.4903	1	30	23	0.4643	1.0759	0.3611	0.6322	-0.5294	0
305	0.4903	1	30	23	0.4643	1.1845	0.7412	1.7202	1.2117	0
306	0.4903	1	30	23	0.4643	1.1942	0.7712	1.7829	1.2818	0
307	0.7117	1	30	24	0.4774	0.929	-0.1591	0.5485	-0.5995	0
308	0.7117	1	30	24	0.4774	0.9459	-0.0991	0.5269	-0.6495	0
309	0.7117	1	30	24	0.4774	1.2506	0.9213	1.0087	0.231	0
310	0.7117	1	30	24	0.4774	1.2431	0.8912	0.6529	-0.3793	0
311	0.7117	1	30	24	0.4774	1.187	0.7212	0.6918	-0.2993	0
312	0.7117	1	30	24	0.4774	0.6717	-1.2193	0.392	-0.9996	0
313	0.7117	1	30	24	0.4774	0.7856	-0.7292	0.516	-0.6795	0
314	0.7117	1	30	24	0.4774	0.8473	-0.4792	0.607	-0.4794	0
315	0.7117	1	30	24	0.4774	0.7676	-0.7992	0.7534	-0.1892	0

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.ZSTD	
316	0.7117	1	30	24	0.4774	0.8109	-0.6192	0.4957	-0.7295	0
317	0.7117	1	30	24	0.4774	1.681	2.1017	1.8317	1.2418	0
318	0.7117	1	30	24	0.4774	0.9495	-0.0891	0.6623	-0.3593	0
319	0.7117	1	30	24	0.4774	0.7169	-1.0193	0.408	-0.9496	0
320	0.7117	1	30	24	0.4774	1.1115	0.4711	0.6471	-0.3894	0
321	0.9476	1	30	25	0.4947	1.0162	0.151	0.5076	-0.5595	0
322	0.9476	1	30	25	0.4947	0.9424	-0.0891	0.5732	-0.4294	0
323	0.9476	1	30	25	0.4947	0.8359	-0.4792	0.6155	-0.3494	0
324	0.9476	1	30	25	0.4947	0.8878	-0.2891	0.469	-0.6395	0
325	0.9476	1	30	25	0.4947	0.8748	-0.3291	0.5291	-0.5095	0
326	0.9476	1	30	25	0.4947	1.0029	0.111	0.815	-0.0092	0
327	0.9476	1	30	25	0.4947	0.9841	0.051	0.5967	-0.3794	0
328	0.9476	1	30	25	0.4947	0.752	-0.7992	0.6037	-0.3694	0
329	0.9476	1	30	25	0.4947	1.0747	0.3411	0.822	0.0008	0
330	0.9476	1	30	25	0.4947	0.688	-1.0693	0.3481	-0.9397	0
331	0.9476	1	30	25	0.4947	1.3376	1.1113	1.0329	0.291	0
332	0.9476	1	30	25	0.4947	1.1612	0.6112	0.7788	-0.0692	0
333	0.9476	1	30	25	0.4947	1.2387	0.8412	1.1531	0.4412	0
334	0.9476	1	30	25	0.4947	1.2855	0.9713	1.1386	0.4311	0
335	1.2033	1	30	26	0.5179	1.7164	1.9217	1.6367	0.9116	0
336	1.2033	1	30	26	0.5179	0.5606	-1.4994	0.3184	-0.8197	0
337	1.2033	1	30	26	0.5179	1.025	0.181	0.5755	-0.2994	0
338	1.2033	1	30	26	0.5179	1.2456	0.8112	0.6795	-0.1393	0
339	1.2033	1	30	26	0.5179	0.8571	-0.3491	0.4498	-0.5296	0
340	1.2033	1	30	26	0.5179	0.8633	-0.3291	0.4012	-0.6296	0
341	1.2033	1	30	26	0.5179	1.1438	0.5311	0.8695	0.1309	0
342	1.2033	1	30	26	0.5179	0.7286	-0.8093	0.5166	-0.3995	0
343	1.2033	1	30	26	0.5179	0.8774	-0.2791	0.7011	-0.0993	0
344	1.2033	1	30	26	0.5179	0.5822	-1.3994	0.3346	-0.7797	0
345	1.2033	1	30	26	0.5179	0.9997	0.111	0.5607	-0.3294	0
346	1.2033	1	30	26	0.5179	0.895	-0.2191	0.4372	-0.5496	0
347	1.2033	1	30	26	0.5179	0.9664	0.011	1.114	0.4111	0
348	1.2033	1	30	26	0.5179	1.1455	0.5311	0.5846	-0.2894	0
349	1.2033	1	30	26	0.5179	0.9225	-0.1291	0.4463	-0.5396	0
350	1.2033	1	30	26	0.5179	0.7624	-0.6792	0.4018	-0.6296	0
351	1.2033	1	30	26	0.5179	0.837	-0.4192	0.3846	-0.6696	0
352	1.2033	1	30	26	0.5179	1.4569	1.3315	2.5042	1.5425	0
353	1.2033	1	30	26	0.5179	1.0382	0.221	0.9646	0.241	0
354	1.4874	1	30	27	0.5498	0.699	-0.8093	0.5329	-0.2395	0
355	1.4874	1	30	27	0.5498	0.6118	-1.1194	0.3682	-0.5196	0
356	1.4874	1	30	27	0.5498	0.9122	-0.1291	0.4867	-0.3095	0
357	1.4874	1	30	27	0.5498	1.3121	0.9013	0.5465	-0.2195	0
358	1.4874	1	30	27	0.5498	0.7422	-0.6593	0.6808	-0.0293	0
359	1.4874	1	30	27	0.5498	0.8849	-0.2091	0.3464	-0.5597	0
360	1.4874	1	30	27	0.5498	0.6968	-0.8093	0.421	-0.4196	0
361	1.4874	1	30	27	0.5498	0.8997	-0.1591	0.538	-0.2295	0
362	1.4874	1	30	27	0.5498	0.8397	-0.3492	0.7661	0.0808	0
363	1.4874	1	30	27	0.5498	1.1511	0.5212	0.9153	0.2509	0
364	1.4874	1	30	27	0.5498	0.7752	-0.5492	0.6846	-0.0193	0
365	1.4874	1	30	27	0.5498	0.8498	-0.3092	0.4007	-0.4596	0
366	1.4874	1	30	27	0.5498	1.0711	0.3111	0.4582	-0.3595	0
367	1.4874	1	30	27	0.5498	0.9187	-0.1091	0.3545	-0.5496	0
368	1.4874	1	30	27	0.5498	1.2308	0.7112	0.9584	0.291	0
369	1.4874	1	30	27	0.5498	0.8719	-0.2491	0.3387	-0.5797	0
370	1.4874	1	30	27	0.5498	0.5914	-1.1994	0.323	-0.6097	0
371	1.4874	1	30	27	0.5498	0.5195	-1.4995	0.2779	-0.7097	0
372	1.8139	1	30	28	0.5955	0.9826	0.101	0.7216	0.1307	0
373	1.8139	1	30	28	0.5955	1.4681	1.1215	0.5287	-0.0895	0
374	1.8139	1	30	28	0.5955	0.8018	-0.3692	0.3734	-0.3096	0
375	1.8139	1	30	28	0.5955	0.7081	-0.6393	0.6138	0.0106	0
376	1.8139	1	30	28	0.5955	0.8294	-0.2992	0.4012	-0.2696	0
377	1.8139	1	30	28	0.5955	0.985	0.101	0.9168	0.3209	0
378	1.8139	1	30	28	0.5955	1.2891	0.7813	1.8434	0.9718	0
379	1.8139	1	30	28	0.5955	0.79	-0.4092	0.3516	-0.3496	0
380	1.8139	1	30	28	0.5955	1.2566	0.7113	0.6345	0.0406	0
381	1.8139	1	30	28	0.5955	1.0303	0.211	0.7111	0.1207	0
382	1.8139	1	30	28	0.5955	1.0404	0.231	0.5528	-0.0594	0
383	1.8139	1	30	28	0.5955	1.0946	0.3611	0.3948	-0.2796	0
384	1.8139	1	30	28	0.5955	1.51	1.2015	3.9545	1.874	0
385	1.8139	1	30	28	0.5955	0.6591	-0.7993	0.396	-0.2796	0
386	1.8139	1	30	28	0.5955	1.2333	0.6612	0.5097	-0.1195	0
387	1.8139	1	30	28	0.5955	0.6983	-0.6693	0.7778	0.1908	0
388	1.8139	1	30	28	0.5955	1.3393	0.8813	1.3908	0.6914	0
389	1.8139	1	30	28	0.5955	1.1744	0.5412	0.4581	-0.1895	0
390	1.8139	1	30	28	0.5955	0.9379	-0.0091	0.4374	-0.2196	0
391	1.8139	1	30	28	0.5955	0.7058	-0.6493	0.5196	-0.0995	0
392	1.8139	1	30	28	0.5955	1.2286	0.6512	0.5752	-0.0294	0
393	1.8139	1	30	28	0.5955	0.7058	-0.6493	0.5196	-0.0995	0
394	2.2082	1	30	29	0.6652	0.9303	0.0209	1.1057	0.5411	0
395	2.2082	1	30	29	0.6652	0.6053	-0.7694	0.288	-0.2497	0

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.ZSTD	
396	2.2082	1	30	29	0.6652	0.9553	0.071	0.8389	0.3508	0
397	2.2082	1	30	29	0.6652	0.5965	-0.7994	0.2595	-0.2997	0
398	2.2082	1	30	29	0.6652	1.0836	0.3311	1.0872	0.5311	0
399	2.2082	1	30	29	0.6652	1.3004	0.7213	0.4393	-0.0396	0
400	2.2082	1	30	29	0.6652	0.7845	-0.3092	0.3449	-0.1597	0
401	2.2082	1	30	29	0.6652	0.8246	-0.2092	0.3785	-0.1196	0
402	2.2082	1	30	29	0.6652	0.5296	-0.9995	0.2103	-0.3898	0
403	2.2082	1	30	29	0.6652	1.2205	0.5812	0.557	0.0906	0
404	2.2082	1	30	29	0.6652	1.3924	0.8714	0.7612	0.2908	0
405	2.2082	1	30	29	0.6652	0.7004	-0.5193	0.7043	0.2407	0
406	2.2082	1	30	29	0.6652	0.9575	0.081	0.8692	0.3709	0
407	2.2082	1	30	29	0.6652	0.8019	-0.2692	0.3697	-0.1296	0
408	2.2082	1	30	29	0.6652	1.3954	0.8814	3.7064	1.6337	0
409	2.2082	1	30	29	0.6652	0.8514	-0.1491	0.4269	-0.0496	0
410	2.2082	1	30	29	0.6652	1.2737	0.6813	0.4237	-0.0596	0
411	2.2082	1	30	29	0.6652	0.8158	-0.2392	0.3828	-0.1096	0
412	2.2082	1	30	29	0.6652	0.9287	0.0209	1.063	0.5111	0
413	2.2082	1	30	29	0.6652	0.9285	0.0209	0.8233	0.3408	0
414	2.2082	1	30	29	0.6652	0.9422	0.0409	1.6163	0.8416	0
415	2.2082	1	30	29	0.6652	0.8158	-0.2392	0.3828	-0.1096	0
416	2.2082	1	30	29	0.6652	0.922	0.0009	0.577	0.1106	0
417	2.2082	1	30	29	0.6652	0.5296	-0.9995	0.2103	-0.3898	0
418	2.2082	1	30	29	0.6652	0.9285	0.0209	0.8233	0.3408	0
419	2.2082	1	30	29	0.6652	1.0049	0.171	3.9987	1.724	0
420	2.7264	1	30	30	0.7855	0.7772	-0.1892	0.4054	-0.0796	0
421	2.7264	1	30	30	0.7855	0.9887	0.191	0.3638	-0.1396	0
422	2.7264	1	30	30	0.7855	0.7339	-0.2693	0.3086	-0.2197	0
423	2.7264	1	30	30	0.7855	0.8443	-0.0592	0.8685	0.3709	0
424	2.7264	1	30	30	0.7855	0.7513	-0.2392	0.3408	-0.1697	0
425	2.7264	1	30	30	0.7855	0.6935	-0.3493	0.2549	-0.2997	0
426	2.7264	1	30	30	0.7855	1.0062	0.221	0.396	-0.0896	0
427	2.7264	1	30	30	0.7855	1.5018	0.9115	0.3215	-0.1997	0
428	2.7264	1	30	30	0.7855	0.5225	-0.7395	0.1393	-0.5499	0
429	2.7264	1	30	30	0.7855	0.8443	-0.0592	0.8685	0.3709	0
430	2.7264	1	30	30	0.7855	1.2313	0.5512	0.5795	0.1206	0
431	2.7264	1	30	30	0.7855	0.6935	-0.3493	0.2549	-0.2997	0
432	2.7264	1	30	30	0.7855	0.7339	-0.2693	0.3086	-0.2197	0
433	2.7264	1	30	30	0.7855	0.7339	-0.2693	0.3086	-0.2197	0
434	2.7264	1	30	30	0.7855	0.7201	-0.2993	0.2875	-0.2497	0
435	2.7264	1	30	30	0.7855	1.2609	0.6013	0.6621	0.2007	0
436	2.7264	1	30	30	0.7855	0.6935	-0.3493	0.2549	-0.2997	0
437	2.7264	1	30	30	0.7855	2.0115	1.482	0.4634	-0.0095	0
438	2.7264	1	30	30	0.7855	0.7772	-0.1892	0.4054	-0.0796	0
439	2.7264	1	30	30	0.7855	0.7339	-0.2693	0.3086	-0.2197	0
440	2.7264	1	30	30	0.7855	1.1772	0.4812	0.5116	0.0505	0
441	2.7264	1	30	30	0.7855	0.7339	-0.2693	0.3086	-0.2197	0
442	2.7264	1	30	30	0.7855	1.1863	0.4912	0.512	0.0505	0
443	2.7264	1	30	30	0.7855	1.0199	0.241	0.4103	-0.0696	0
444	2.7264	1	30	30	0.7855	0.7339	-0.2693	0.3086	-0.2197	0
445	2.7264	1	30	30	0.7855	1.1232	0.4011	1.6249	0.8416	0
446	2.7264	1	30	30	0.7855	1.2433	0.5712	0.7596	0.2908	0
447	2.7264	1	30	30	0.7855	0.7339	-0.2693	0.3086	-0.2197	0
448	2.7264	1	30	30	0.7855	0.9887	0.191	0.3638	-0.1396	0
449	3.5424	1	30	31	1.0627	1.1751	0.4812	0.6983	0.2307	0
450	3.5424	1	30	31	1.0627	0.6111	-0.2094	0.1027	-0.6599	0
451	3.5424	1	30	31	1.0627	0.6111	-0.2094	0.1027	-0.6599	0
452	3.5424	1	30	31	1.0627	0.6111	-0.2094	0.1027	-0.6599	0
453	3.5424	1	30	31	1.0627	0.6111	-0.2094	0.1027	-0.6599	0
454	3.5424	1	30	31	1.0627	1.1293	0.4411	0.5049	0.0405	0
455	3.5424	1	30	31	1.0627	1.1588	0.4712	0.6232	0.1606	0
456	3.5424	1	30	31	1.0627	0.6111	-0.2094	0.1027	-0.6599	0
457	3.5424	1	30	31	1.0627	0.9535	0.251	0.2192	-0.3698	0
458	3.5424	1	30	31	1.0627	0.6111	-0.2094	0.1027	-0.6599	0
459	3.5424	1	30	31	1.0627	1.1424	0.4511	0.5515	0.0906	0
460	3.5424	1	30	31	1.0627	0.9535	0.251	0.2192	-0.3698	0
461	3.5424	1	30	31	1.0627	0.6111	-0.2094	0.1027	-0.6599	0
462	3.5424	1	30	31	1.0627	0.6111	-0.2094	0.1027	-0.6599	0
463	4.8406	0	30	32	1.8638	1	0	1	0	0
464	4.8406	0	30	32	1.8638	1	0	1	0	0
465	4.8406	0	30	32	1.8638	1	0	1	0	0
466	-3.3501	1	30	5	0.5543	1.6137	1.8916	9.9	7.6299	0
467	-2.3091	1	30	9	0.4797	1.681	2.3617	2.3081	1.5623	0
468	-2.0836	1	30	10	0.4706	0.9436	-0.1491	1.0166	0.241	0
469	-1.8656	1	30	11	0.4633	1.3845	1.4614	1.5694	1.0216	0
470	-1.8656	1	30	11	0.4633	0.9824	0.011	1.1123	0.3811	0
471	-1.8656	1	30	11	0.4633	0.7906	-0.8192	0.7416	-0.2793	0
472	-1.8656	1	30	11	0.4633	1.8828	2.9119	2.7726	2.2528	0
473	-1.6538	1	30	12	0.4574	3.0352	5.463	3.0988	2.7431	0
474	-1.6538	1	30	12	0.4574	1.1764	0.7512	1.0039	0.191	0
475	-1.4469	1	30	13	0.4526	0.9889	0.041	1.0876	0.3411	0

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.ZSTD	
476	-1.2439	1	30	14	0.4487	0.9521	-0.109	1.1532	0.4712	0
477	-1.2439	1	30	14	0.4487	2.3313	4.0023	2.9519	2.983	0
478	-1.0439	1	30	15	0.4457	1.0515	0.2911	1.0122	0.171	0
479	-1.0439	1	30	15	0.4457	1.0943	0.4511	1.1078	0.3811	0
480	-1.0439	1	30	15	0.4457	1.285	1.1313	3.6661	3.8537	0
481	-1.0439	1	30	15	0.4457	1.0212	0.171	1.0268	0.211	0
482	-1.0439	1	30	15	0.4457	1.2504	1.0113	1.4052	0.9714	0
483	-1.0439	1	30	15	0.4457	1.4149	1.5614	1.6942	1.4617	0
484	-1.0439	1	30	15	0.4457	1.7051	2.4217	1.4459	1.0414	0
485	-1.0439	1	30	15	0.4457	0.8718	-0.4491	0.7199	-0.5593	0
486	-0.8463	1	30	16	0.4436	1.1878	0.7912	1.265	0.7113	0
487	-0.8463	1	30	16	0.4436	0.9565	-0.089	0.6138	-0.9094	0
488	-0.8463	1	30	16	0.4436	1.678	2.3517	1.3619	0.9014	0
489	-0.6501	1	30	17	0.4423	1.1065	0.5011	1.0871	0.3411	0
490	-0.6501	1	30	17	0.4423	0.8565	-0.5191	0.7179	-0.5893	0
491	-0.6501	1	30	17	0.4423	0.8408	-0.5892	0.6826	-0.6893	0
492	-0.6501	1	30	17	0.4423	0.8835	-0.3991	0.7308	-0.5493	0
493	-0.6501	1	30	17	0.4423	0.9886	0.041	0.8392	-0.2492	0
494	-0.6501	1	30	17	0.4423	1.5002	1.8215	1.2828	0.7513	0
495	-0.6501	1	30	17	0.4423	1.0345	0.221	0.8523	-0.2191	0
496	-0.4547	1	30	18	0.442	0.7494	-1.0193	0.5491	-1.0895	0
497	-0.4547	1	30	18	0.442	0.6079	-1.7494	0.4282	-1.5296	0
498	-0.4547	1	30	18	0.442	0.9308	-0.1991	0.8573	-0.1891	0
499	-0.4547	1	30	18	0.442	0.6568	-1.4893	0.4803	-1.3295	0
500	-0.4547	1	30	18	0.442	0.4469	-2.7396	0.3331	-1.9497	0
501	-0.4547	1	30	18	0.442	1.1931	0.8112	0.8737	-0.1491	0
502	-0.4547	1	30	18	0.442	0.601	-1.7894	0.4516	-1.4395	0
503	-0.4547	1	30	18	0.442	2.2397	3.7822	2.368	2.4224	0
504	-0.4547	1	30	18	0.442	1.1505	0.6612	0.8189	-0.2892	0
505	-0.4547	1	30	18	0.442	0.9195	-0.2491	0.7391	-0.5093	0
506	-0.2592	1	30	19	0.4426	1.0261	0.191	1.2939	0.7413	0
507	-0.2592	1	30	19	0.4426	0.9104	-0.2791	0.9	-0.0691	0
508	-0.2592	1	30	19	0.4426	1.2372	0.9612	1.2617	0.6813	0
509	-0.2592	1	30	19	0.4426	0.9507	-0.119	0.6194	-0.8094	0
510	-0.2592	1	30	19	0.4426	0.9117	-0.2791	0.615	-0.8194	0
511	-0.2592	1	30	19	0.4426	0.4858	-2.4695	0.3405	-1.8097	0
512	-0.2592	1	30	19	0.4426	0.7552	-0.9792	0.5776	-0.9294	0
513	-0.2592	1	30	19	0.4426	1.9665	3.112	3.6908	3.7037	0
514	-0.0625	1	30	20	0.4445	1.8453	2.7818	2.0735	1.8421	0
515	-0.0625	1	30	20	0.4445	0.7887	-0.8192	0.5294	-0.9995	0
516	-0.0625	1	30	20	0.4445	1.1451	0.6311	0.6872	-0.5493	0
517	-0.0625	1	30	20	0.4445	1.4765	1.7315	1.3435	0.7913	0
518	-0.0625	1	30	20	0.4445	0.8688	-0.4591	0.6235	-0.7194	0
519	-0.0625	1	30	20	0.4445	0.881	-0.4091	0.7389	-0.4193	0
520	-0.0625	1	30	20	0.4445	0.687	-1.3093	0.5317	-0.9895	0
521	0.1365	1	30	21	0.4478	1.1762	0.7412	0.9564	0.101	0
522	0.1365	1	30	21	0.4478	1.4525	1.6515	1.5654	1.0816	0
523	0.1365	1	30	21	0.4478	0.9701	-0.029	0.6799	-0.4993	0
524	0.1365	1	30	21	0.4478	1.0197	0.161	0.7746	-0.2792	0
525	0.1365	1	30	21	0.4478	0.8427	-0.5692	0.6245	-0.6394	0
526	0.1365	1	30	21	0.4478	0.913	-0.2691	1.3439	0.7613	0
527	0.1365	1	30	21	0.4478	0.7922	-0.7892	0.5097	-0.9495	0
528	0.1365	1	30	21	0.4478	0.8926	-0.3491	0.7338	-0.3693	0
529	0.1365	1	30	21	0.4478	0.8214	-0.6592	0.629	-0.6294	0
530	0.1365	1	30	21	0.4478	0.7288	-1.0893	0.5002	-0.9795	0
531	0.1365	1	30	21	0.4478	0.8764	-0.4191	0.5099	-0.9495	0
532	0.1365	1	30	21	0.4478	0.6383	-1.5494	0.5054	-0.9695	0
533	0.1365	1	30	21	0.4478	0.9238	-0.2191	0.6569	-0.5593	0
534	0.3391	1	30	22	0.4528	0.6731	-1.3493	0.455	-0.9895	0
535	0.3391	1	30	22	0.4528	0.8996	-0.3191	0.7527	-0.2692	0
536	0.3391	1	30	22	0.4528	0.8613	-0.4791	1.3138	0.6813	0
537	0.3391	1	30	22	0.4528	0.9726	-0.019	0.5451	-0.7495	0
538	0.3391	1	30	22	0.4528	1.4856	1.7215	2.4861	2.0225	0
539	0.3391	1	30	22	0.4528	0.9195	-0.2291	0.7278	-0.3193	0
540	0.3391	1	30	22	0.4528	0.6711	-1.3593	0.5732	-0.6694	0
541	0.3391	1	30	22	0.4528	0.9521	-0.099	0.8958	0.0109	0
542	0.3391	1	30	22	0.4528	0.8834	-0.3791	0.5602	-0.7094	0
543	0.5473	1	30	23	0.46	0.9486	-0.1091	0.846	-0.0392	0
544	0.5473	1	30	23	0.46	0.7395	-0.9993	0.4699	-0.8195	0
545	0.5473	1	30	23	0.46	0.5988	-1.6994	1.3492	0.7013	0
546	0.5473	1	30	23	0.46	0.963	-0.049	0.6167	-0.4794	0
547	0.5473	1	30	23	0.46	1.2248	0.8812	0.7961	-0.1192	0
548	0.5473	1	30	23	0.46	0.6429	-1.4694	0.3975	-1.0096	0
549	0.5473	1	30	23	0.46	0.8431	-0.5392	0.484	-0.7795	0
550	0.5473	1	30	23	0.46	1.0541	0.2911	0.5632	-0.5894	0
551	0.5473	1	30	23	0.46	0.9172	-0.2291	0.6563	-0.3893	0
552	0.5473	1	30	23	0.46	0.8836	-0.3691	0.6737	-0.3593	0
553	0.5473	1	30	23	0.46	0.8647	-0.4491	0.4739	-0.8095	0
554	0.7631	1	30	24	0.4697	0.6885	-1.1993	0.4321	-0.7796	0
555	0.7631	1	30	24	0.4697	0.7697	-0.8292	0.4573	-0.7195	0

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.ZSTD	
556	0.7631	1	30	24	0.4697	0.6724	-1.2793	0.4056	-0.8396	0
557	0.7631	1	30	24	0.4697	0.9015	-0.2791	0.4695	-0.6895	0
558	0.7631	1	30	24	0.4697	1.0834	0.3911	0.9373	0.1509	0
559	0.7631	1	30	24	0.4697	0.6588	-1.3393	0.4084	-0.8396	0
560	0.7631	1	30	24	0.4697	1.0176	0.151	0.7942	-0.0692	0
561	0.7631	1	30	24	0.4697	0.5557	-1.8694	0.3879	-0.8896	0
562	0.7631	1	30	24	0.4697	1.4133	1.4414	2.5286	1.7525	0
563	0.7631	1	30	24	0.4697	1.1311	0.5511	2.2578	1.5423	0
564	0.9898	1	30	25	0.483	1.2207	0.8212	0.6421	-0.2394	0
565	0.9898	1	30	25	0.483	0.7843	-0.7292	0.4271	-0.6496	0
566	0.9898	1	30	25	0.483	0.9222	-0.1891	0.5056	-0.4895	0
567	0.9898	1	30	25	0.483	1.0578	0.2911	0.692	-0.1593	0
568	0.9898	1	30	25	0.483	1.1864	0.7112	1.5113	0.8215	0
569	0.9898	1	30	25	0.483	1.1632	0.6412	0.583	-0.3394	0
570	0.9898	1	30	25	0.483	0.7363	-0.9293	0.3886	-0.7396	0
571	0.9898	1	30	25	0.483	0.8635	-0.4091	0.4523	-0.5995	0
572	0.9898	1	30	25	0.483	0.695	-1.1093	0.4232	-0.6596	0
573	0.9898	1	30	25	0.483	1.0222	0.171	0.5027	-0.4895	0
574	1.2313	1	30	26	0.5008	1.4121	1.3114	1.2113	0.5212	0
575	1.2313	1	30	26	0.5008	1.1001	0.4211	0.5691	-0.2594	0
576	1.2313	1	30	26	0.5008	1.0752	0.3411	0.7329	-0.0193	0
577	1.2313	1	30	26	0.5008	0.947	-0.0791	0.4522	-0.4595	0
578	1.2313	1	30	26	0.5008	0.869	-0.3491	1.083	0.3911	0
579	1.2313	1	30	26	0.5008	0.4621	-2.1495	0.2761	-0.8397	0
580	1.2313	1	30	26	0.5008	0.6206	-1.3594	0.3357	-0.6997	0
581	1.2313	1	30	26	0.5008	0.7317	-0.8793	0.4553	-0.4495	0
582	1.2313	1	30	26	0.5008	0.8379	-0.4692	0.4733	-0.4195	0
583	1.2313	1	30	26	0.5008	0.7311	-0.8793	0.4088	-0.5396	0
584	1.4938	1	30	27	0.5251	0.618	-1.2494	0.3344	-0.5297	0
585	1.4938	1	30	27	0.5251	0.5155	-1.6995	0.2824	-0.6397	0
586	1.4938	1	30	27	0.5251	0.6413	-1.1494	0.376	-0.4496	0
587	1.4938	1	30	27	0.5251	1.3712	1.1214	0.7677	0.1108	0
588	1.7867	1	30	28	0.559	0.883	-0.2091	0.544	-0.0495	0
589	1.7867	1	30	28	0.559	0.8866	-0.1991	0.5408	-0.0495	0
590	1.7867	1	30	28	0.559	1.3143	0.9013	1.1359	0.5111	0
591	1.7867	1	30	28	0.559	1.3875	1.0714	0.6223	0.0406	0
592	1.7867	1	30	28	0.559	0.6987	-0.7993	0.3279	-0.3597	0
593	2.1253	1	30	29	0.6077	0.5591	-1.1194	0.2321	-0.3498	0
594	2.1253	1	30	29	0.6077	0.7247	-0.5793	0.3304	-0.1797	0
595	2.1253	1	30	29	0.6077	1.6694	1.4717	0.6249	0.1606	0
596	2.1253	1	30	29	0.6077	1.2907	0.7713	0.4375	-0.0396	0
597	2.1253	1	30	29	0.6077	1.1727	0.5312	0.371	-0.1296	0
598	3.0857	1	30	31	0.8089	0.7824	-0.1692	0.4337	-0.0396	0

Appendix C: Reading examinees measurement report (arranged by N)

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.ZSTD	
1	-3.0082	1	5	2	0.6409	0.9297	0.4209	0.9016	0.2709	0
2	-2.7006	1	5	3	0.4853	0.7261	0.1007	0.8855	0.1609	0
3	-2.2015	1	5	6	0.3751	1.7529	1.3818	2.501	1.7625	0
4	-2.0592	1	5	7	0.3812	0.5448	-0.5895	0.4574	-0.7495	0
5	-2.0592	1	5	7	0.3812	0.5966	-0.4794	0.767	-0.1292	0
6	-1.7478	1	5	9	0.406	0.9772	0.281	1.1917	0.4912	0
7	-1.7478	1	5	9	0.406	0.985	0.291	1.2265	0.5312	0
8	-1.7478	1	5	9	0.406	0.773	0.0408	0.8821	0.1009	0
9	-1.7478	1	5	9	0.406	0.6136	-0.1794	0.6575	-0.2393	0
10	-1.5824	1	5	10	0.4051	1.986	1.152	2.7292	1.6527	0
11	-1.4227	1	5	11	0.3928	0.6213	-0.2294	0.5857	-0.1594	0
12	-1.4227	1	5	11	0.3928	0.6454	-0.1894	0.7982	0.1108	0
13	-1.4227	1	5	11	0.3928	1.0827	0.3811	1.2457	0.5612	0
14	-1.2747	1	5	12	0.3765	1.512	0.8315	1.7235	0.9117	0
15	-1.2747	1	5	12	0.3765	0.5612	-0.4194	0.5559	-0.1094	0
16	-1.2747	1	5	12	0.3765	0.4888	-0.5595	0.378	-0.3696	0
17	-1.2747	1	5	12	0.3765	0.4886	-0.5595	0.4533	-0.2495	0
18	-1.1385	1	5	13	0.362	0.4041	-0.8796	0.4508	-0.1695	0
19	-1.1385	1	5	13	0.362	0.4892	-0.6695	0.5386	-0.0495	0
20	-1.1385	1	5	13	0.362	0.1768	-1.6498	0.2141	-0.5798	0
21	-1.0114	1	5	14	0.352	0.3877	-1.0596	0.4537	-0.0995	0
22	-1.0114	1	5	14	0.352	0.3406	-1.1997	0.2845	-0.3497	0
23	-1.0114	1	5	14	0.352	0.4949	-0.7695	0.6411	0.1206	0
24	-1.0114	1	5	14	0.352	1.4584	0.8415	1.0781	0.4911	0
25	-0.8895	1	5	15	0.3471	0.5801	-0.6094	0.4523	-0.0595	0
26	-0.8895	1	5	15	0.3471	1.4394	0.8414	1.9602	1.012	0
27	-0.8895	1	5	15	0.3471	1.2316	0.5612	1.0504	0.4911	0
28	-0.8895	1	5	15	0.3471	2.1642	1.6422	2.0413	1.052	0
29	-0.8895	1	5	15	0.3471	0.4089	-1.0596	0.258	-0.3497	0
30	-0.8895	1	5	15	0.3471	0.167	-1.9998	0.201	-0.4598	0
31	-0.8895	1	5	15	0.3471	0.6445	-0.4594	0.6353	0.1406	0
32	-0.7692	1	5	16	0.3473	0.7229	-0.2793	0.4661	-0.0195	0
33	-0.7692	1	5	16	0.3473	0.8218	-0.0992	0.5623	0.0906	0
34	-0.7692	1	5	16	0.3473	0.8218	-0.0992	0.5623	0.0906	0
35	-0.7692	1	5	16	0.3473	1.194	0.5012	0.9726	0.451	0
36	-0.7692	1	5	16	0.3473	0.9355	0.1009	0.7414	0.2607	0
37	-0.7692	1	5	16	0.3473	0.0488	-2.84	0.0642	-0.8199	0
38	-0.6473	1	5	17	0.3516	2.1138	1.5021	1.8155	0.9418	0
39	-0.6473	1	5	17	0.3516	0.7932	-0.1092	0.6142	0.1506	0
40	-0.6473	1	5	17	0.3516	0.7292	-0.2293	0.8251	0.3408	0
41	-0.5213	1	5	18	0.3589	0.2235	-1.4298	0.1695	-0.4798	0
42	-0.5213	1	5	18	0.3589	0.9466	0.1609	0.8096	0.3308	0
43	-0.5213	1	5	18	0.3589	0.5405	-0.5495	0.5022	0.0405	0
44	-0.5213	1	5	18	0.3589	0.3125	-1.1197	0.307	-0.2197	0
45	-0.5213	1	5	18	0.3589	0.8314	-0.0192	0.7078	0.2407	0
46	-0.5213	1	5	18	0.3589	0.6356	-0.3594	0.4272	-0.0496	0
47	-0.5213	1	5	18	0.3589	0.9447	0.1609	0.7245	0.2607	0
48	-0.5213	1	5	18	0.3589	1.073	0.3411	2.7051	1.3127	0
49	-0.3893	1	5	19	0.3678	1.3004	0.6213	1.2276	0.6212	0
50	-0.3893	1	5	19	0.3678	2.2878	1.5423	1.7084	0.8917	0
51	-0.3893	1	5	19	0.3678	0.9851	0.231	0.8229	0.3408	0
52	-0.3893	1	5	19	0.3678	0.148	-1.6699	0.1196	-0.5999	0
53	-0.3893	1	5	19	0.3678	0.5142	-0.5595	0.4358	-0.0396	0
54	-0.2505	1	5	20	0.3772	0.6814	-0.2293	0.6134	0.1506	0
55	-0.2505	1	5	20	0.3772	0.329	-0.9897	0.3798	-0.1096	0
56	-0.2505	1	5	20	0.3772	0.8232	0.0008	0.5658	0.1006	0
57	-0.2505	1	5	20	0.3772	0.329	-0.9897	0.3798	-0.1096	0
58	-0.2505	1	5	20	0.3772	1.2221	0.5312	0.9085	0.4009	0
59	-0.2505	1	5	20	0.3772	0.5458	-0.4795	0.517	0.0505	0
60	-0.2505	1	5	20	0.3772	3.6419	2.4136	3.3979	1.5434	0
61	-0.1046	1	5	21	0.3869	0.1855	-1.4798	0.1653	-0.4898	0
62	-0.1046	1	5	21	0.3869	0.287	-1.1197	0.2198	-0.3698	0
63	-0.1046	1	5	21	0.3869	0.5471	-0.4895	0.5373	0.0705	0
64	-0.1046	1	5	21	0.3869	0.5471	-0.4895	0.5373	0.0705	0
65	-0.1046	1	5	21	0.3869	2.0622	1.3521	1.5612	0.8116	0
66	0.0492	1	5	22	0.3977	0.6678	-0.2593	0.441	-0.0396	0
67	0.0492	1	5	22	0.3977	0.2238	-1.3398	0.1879	-0.4298	0
68	0.2125	1	5	23	0.411	0.6256	-0.3194	0.3804	-0.1096	0
69	0.3882	1	5	24	0.4279	1.5739	0.8816	1.1009	0.5411	0
70	0.3882	1	5	24	0.4279	0.4586	-0.6095	0.335	-0.1797	0

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.ZSTD	
71	0.3882	1	5	24	0.4279	1.2326	0.5412	0.7176	0.2507	0
72	0.3882	1	5	24	0.4279	0.0155	-2.6	0.0243	-1.04	0
73	0.3882	1	5	24	0.4279	0.2579	-1.1197	0.1623	-0.4898	0
74	0.3882	1	5	24	0.4279	1.5739	0.8816	1.1009	0.5411	0
75	0.3882	1	5	24	0.4279	1.2326	0.5412	0.7176	0.2507	0
76	0.58	1	5	25	0.4485	1.3061	0.6113	4.175	1.7742	0
77	0.58	1	5	25	0.4485	0.1615	-1.3698	0.1217	-0.5999	0
78	0.58	1	5	25	0.4485	1.6413	0.9316	1.1551	0.5812	0
79	0.58	1	5	25	0.4485	1.0514	0.3411	0.732	0.2607	0
80	0.58	1	5	25	0.4485	0.0761	-1.8099	0.0605	-0.8199	0
81	0.58	1	5	25	0.4485	0.5198	-0.4295	0.3685	-0.1296	0
82	0.7916	1	5	26	0.4717	0.1185	-1.4899	0.0754	-0.7499	0
83	0.7916	1	5	26	0.4717	0.4636	-0.5095	0.3178	-0.1997	0
84	0.7916	1	5	26	0.4717	0.1271	-1.4499	0.0864	-0.7099	0
85	0.7916	1	5	26	0.4717	0.9172	0.1909	0.6161	0.1606	0
86	0.7916	1	5	26	0.4717	0.6808	-0.1393	0.4069	-0.0796	0
87	0.7916	1	5	26	0.4717	0.1271	-1.4499	0.0864	-0.7099	0
88	1.0258	1	5	27	0.4962	0.0035	-2.68	0.0086	-1.22	0
89	1.0258	1	5	27	0.4962	0.0035	-2.68	0.0086	-1.22	0
90	1.0258	1	5	27	0.4962	0.4789	-0.4695	0.2636	-0.2897	0
91	1.0258	1	5	27	0.4962	0.4389	-0.5496	0.2978	-0.2297	0
92	1.0258	1	5	27	0.4962	0.513	-0.4095	0.2835	-0.2597	0
93	1.0258	1	5	27	0.4962	0.4389	-0.5496	0.2978	-0.2297	0
94	1.0258	1	5	27	0.4962	6.3993	3.2864	3.4676	1.5635	0
95	1.0258	1	5	27	0.4962	0.4389	-0.5496	0.2978	-0.2297	0
96	1.2852	1	5	28	0.5233	0.1907	-1.2398	0.1148	-0.6199	0
97	1.2852	1	5	28	0.5233	0.1981	-1.2198	0.1731	-0.4698	0
98	1.2852	1	5	28	0.5233	0.1615	-1.3498	0.1002	-0.6599	0
99	1.2852	1	5	28	0.5233	0.1981	-1.2198	0.1731	-0.4698	0
100	1.2852	1	5	28	0.5233	0.1981	-1.2198	0.1731	-0.4698	0
101	1.2852	1	5	28	0.5233	0.1907	-1.2398	0.1148	-0.6199	0
102	1.2852	1	5	28	0.5233	1.2786	0.5913	0.9043	0.4009	0
103	1.2852	1	5	28	0.5233	0.7749	-0.0092	0.4635	-0.0095	0
104	1.2852	1	5	28	0.5233	0.1981	-1.2198	0.1731	-0.4698	0
105	1.5774	1	5	29	0.5601	0.2919	-0.9397	0.2121	-0.3798	0
106	1.5774	1	5	29	0.5601	1.509	0.8115	0.7801	0.3008	0
107	1.5774	1	5	29	0.5601	1.5657	0.8616	0.8348	0.3508	0
108	1.5774	1	5	29	0.5601	1.2027	0.5112	1.1162	0.5511	0
109	1.5774	1	5	29	0.5601	1.5657	0.8616	0.8348	0.3508	0
110	1.5774	1	5	29	0.5601	0.2919	-0.9397	0.2121	-0.3798	0
111	1.9237	1	5	30	0.6226	0.8173	0.0808	0.458	-0.0095	0
112	1.9237	1	5	30	0.6226	0.8912	0.1709	0.4572	-0.0195	0
113	1.9237	1	5	30	0.6226	0.8912	0.1709	0.4572	-0.0195	0
114	1.9237	1	5	30	0.6226	0.8912	0.1709	0.4572	-0.0195	0
115	1.9237	1	5	30	0.6226	0.4452	-0.4996	0.3847	-0.1096	0
116	1.9237	1	5	30	0.6226	0.4083	-0.5796	0.3373	-0.1697	0
117	1.9237	1	5	30	0.6226	1.9217	1.1219	1.0252	0.491	0
118	2.383	1	5	31	0.7466	0.4994	-0.2295	0.6175	0.1606	0
119	2.383	1	5	31	0.7466	0.4994	-0.2295	0.6175	0.1606	0
120	2.383	1	5	31	0.7466	0.4505	-0.3095	0.2357	-0.3398	0
121	3.1536	1	5	32	1.0545	0.1526	-0.5598	0.0862	-0.7099	0
122	3.1536	1	5	32	1.0545	1.4612	0.7515	1.6643	0.8617	0
123	4.4697	0	5	33	1.8845	1	0	1	0	0
124	4.4697	0	5	33	1.8845	1	0	1	0	0
125	-4.7748	1	5	1	0.9255	0.7775	0.2308	0.5987	0.1406	0
126	-3.2439	1	5	4	0.656	0.3962	-0.5196	0.5709	-0.1594	0
127	-3.2439	1	5	4	0.656	0.6429	-0.1094	0.8073	0.1408	0
128	-3.2439	1	5	4	0.656	0.3962	-0.5196	0.5709	-0.1594	0
129	-2.8311	1	5	5	0.6241	0.4571	-0.4695	0.4768	-0.4095	0
130	-2.8311	1	5	5	0.6241	0.2416	-0.9598	0.3729	-0.6096	0
131	-2.8311	1	5	5	0.6241	2.2368	1.3322	1.541	0.8115	0
132	-2.8311	1	5	5	0.6241	1.0669	0.3711	0.9233	0.2209	0
133	-2.8311	1	5	5	0.6241	0.9744	0.271	0.8415	0.1208	0
134	-2.8311	1	5	5	0.6241	0.4571	-0.4695	0.4768	-0.4095	0
135	-2.4701	1	5	6	0.5769	0.418	-0.7096	0.6302	-0.2494	0
136	-2.4701	1	5	6	0.5769	0.3386	-0.8997	0.3543	-0.7896	0
137	-2.4701	1	5	6	0.5769	0.9186	0.1509	1.2499	0.5612	0
138	-2.4701	1	5	6	0.5769	0.4093	-0.7296	0.4415	-0.5996	0
139	-2.4701	1	5	6	0.5769	0.4323	-0.6696	0.651	-0.2093	0
140	-2.4701	1	5	6	0.5769	0.4093	-0.7296	0.4415	-0.5996	0
141	-2.4701	1	5	6	0.5769	1.0899	0.3711	0.7912	0.0008	0
142	-2.4701	1	5	6	0.5769	1.6073	0.9216	2.0168	1.232	0
143	-2.4701	1	5	6	0.5769	1.0899	0.3711	0.7912	0.0008	0
144	-2.162	1	5	7	0.5343	0.485	-0.6595	0.5228	-0.5195	0
145	-2.162	1	5	7	0.5343	0.4037	-0.8596	0.4394	-0.6996	0
146	-2.162	1	5	7	0.5343	1.8351	1.1818	1.7845	1.1018	0
147	-2.162	1	5	7	0.5343	0.485	-0.6595	0.5228	-0.5195	0
148	-2.162	1	5	7	0.5343	1.5637	0.9116	1.3585	0.6814	0
149	-1.8951	1	5	8	0.5001	1.6584	1.0317	1.9791	1.322	0
150	-1.8951	1	5	8	0.5001	0.686	-0.2893	0.6231	-0.3894	0

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.ZSTD	
151	-1.8951	1	5	8	0.5001	1.0373	0.281	1.289	0.6113	0
152	-1.8951	1	5	8	0.5001	0.6727	-0.3093	0.7659	-0.1292	0
153	-1.659	1	5	9	0.4724	0.3133	-1.1997	0.3084	-1.2197	0
154	-1.659	1	5	9	0.4724	0.6	-0.4694	0.6578	-0.3493	0
155	-1.659	1	5	9	0.4724	1.1789	0.4812	1.0626	0.3211	0
156	-1.659	1	5	9	0.4724	2.1957	1.5622	2.4897	1.8025	0
157	-1.659	1	5	9	0.4724	0.3395	-1.1197	0.4319	-0.8596	0
158	-1.659	1	5	9	0.4724	0.6	-0.4694	0.6578	-0.3493	0
159	-1.659	1	5	9	0.4724	0.6	-0.4694	0.6578	-0.3493	0
160	-1.659	1	5	9	0.4724	2.1957	1.5622	2.4897	1.8025	0
161	-1.659	1	5	9	0.4724	0.4659	-0.7695	0.4871	-0.7195	0
162	-1.4468	1	5	10	0.4495	0.7858	-0.1192	0.6951	-0.2893	0
163	-1.4468	1	5	10	0.4495	2.4592	1.7925	2.5805	1.9026	0
164	-1.4468	1	5	10	0.4495	0.6346	-0.4094	0.7039	-0.2793	0
165	-1.4468	1	5	10	0.4495	0.731	-0.2193	0.845	-0.0292	0
166	-1.2535	1	5	11	0.4305	0.3672	-1.0496	0.4269	-0.8896	0
167	-1.2535	1	5	11	0.4305	1.7379	1.1317	1.563	0.9416	0
168	-1.2535	1	5	11	0.4305	0.5965	-0.4894	0.5607	-0.5594	0
169	-1.2535	1	5	11	0.4305	2.3887	1.7424	2.606	1.9126	0
170	-1.2535	1	5	11	0.4305	0.3463	-1.1197	0.41	-0.9296	0
171	-1.2535	1	5	11	0.4305	0.8487	-0.0192	0.805	-0.0892	0
172	-1.075	1	5	12	0.4148	0.8917	0.0509	1.0008	0.231	0
173	-1.075	1	5	12	0.4148	2.425	1.7724	2.162	1.5122	0
174	-1.075	1	5	12	0.4148	1.4582	0.8215	1.3531	0.6914	0
175	-0.9085	1	5	13	0.4016	1.4284	0.7914	1.2525	0.5713	0
176	-0.9085	1	5	13	0.4016	0.1856	-1.6898	0.2182	-1.4398	0
177	-0.9085	1	5	13	0.4016	0.0576	-2.5199	0.0869	-2.1099	0
178	-0.9085	1	5	13	0.4016	0.439	-0.8496	0.4109	-0.8396	0
179	-0.9085	1	5	13	0.4016	0.439	-0.8496	0.4109	-0.8396	0
180	-0.9085	1	5	13	0.4016	0.7891	-0.1092	0.8104	-0.0492	0
181	-0.7518	1	5	14	0.3905	2.2159	1.5722	1.821	1.1418	0
182	-0.7518	1	5	14	0.3905	0.5767	-0.5194	0.583	-0.4094	0
183	-0.7518	1	5	14	0.3905	0.3405	-1.1197	0.3116	-1.0497	0
184	-0.7518	1	5	14	0.3905	0.9317	0.1209	0.8243	0.0008	0
185	-0.7518	1	5	14	0.3905	1.8293	1.2218	1.694	1.0217	0
186	-0.7518	1	5	14	0.3905	0.2739	-1.3297	0.2719	-1.1697	0
187	-0.6031	1	5	15	0.3809	1.3089	0.6413	1.0893	0.3711	0
188	-0.6031	1	5	15	0.3809	0.9449	0.1409	0.8604	0.0709	0
189	-0.6031	1	5	15	0.3809	0.6483	-0.3694	0.5947	-0.3494	0
190	-0.6031	1	5	15	0.3809	0.5688	-0.5394	0.5195	-0.4895	0
191	-0.6031	1	5	15	0.3809	1.4849	0.8515	1.305	0.6213	0
192	-0.6031	1	5	15	0.3809	2.0704	1.4421	1.6015	0.9116	0
193	-0.6031	1	5	15	0.3809	0.7292	-0.2193	0.6247	-0.2894	0
194	-0.6031	1	5	15	0.3809	0.4836	-0.7295	0.4697	-0.5895	0
195	-0.6031	1	5	15	0.3809	0.9833	0.201	0.8597	0.0709	0
196	-0.4611	1	5	16	0.3729	2.244	1.6122	1.7892	1.0518	0
197	-0.4611	1	5	16	0.3729	1.0198	0.251	0.8607	0.1009	0
198	-0.4611	1	5	16	0.3729	0.8656	0.0109	0.682	-0.1593	0
199	-0.4611	1	5	16	0.3729	1.0186	0.251	0.7936	0.0108	0
200	-0.4611	1	5	16	0.3729	1.7496	1.1417	1.577	0.8716	0
201	-0.4611	1	5	16	0.3729	0.373	-1.0296	0.3212	-0.8697	0
202	-0.4611	1	5	16	0.3729	0.2479	-1.4398	0.2279	-1.1398	0
203	-0.4611	1	5	16	0.3729	0.8938	0.0609	0.8067	0.0208	0
204	-0.3247	1	5	17	0.3661	0.2091	-1.6198	0.1975	-1.1598	0
205	-0.3247	1	5	17	0.3661	0.6882	-0.3093	0.5414	-0.3495	0
206	-0.3247	1	5	17	0.3661	0.1003	-2.1999	0.0969	-1.5799	0
207	-0.3247	1	5	17	0.3661	0.3998	-0.9696	0.3666	-0.6896	0
208	-0.3247	1	5	17	0.3661	1.5562	0.9416	1.2556	0.5613	0
209	-0.3247	1	5	17	0.3661	2.9235	2.1629	2.6147	1.6026	0
210	-0.1926	1	5	18	0.3609	2.1281	1.5321	1.6276	0.8816	0
211	-0.1926	1	5	18	0.3609	0.2548	-1.4597	0.2128	-1.0198	0
212	-0.1926	1	5	18	0.3609	0.4278	-0.9096	0.3728	-0.6196	0
213	-0.1926	1	5	18	0.3609	0.3463	-1.1497	0.2782	-0.8397	0
214	-0.1926	1	5	18	0.3609	1.2297	0.5512	1.0217	0.331	0
215	-0.1926	1	5	18	0.3609	0.5469	-0.6195	0.4737	-0.4195	0
216	-0.1926	1	5	18	0.3609	3.5168	2.6135	2.8606	1.6829	0
217	-0.0638	1	5	19	0.3573	1.4605	0.8415	1.2076	0.5212	0
218	-0.0638	1	5	19	0.3573	0.3259	-1.2397	1.3833	0.6814	0
219	-0.0638	1	5	19	0.3573	0.9866	0.191	0.806	0.1008	0
220	-0.0638	1	5	19	0.3573	0.2468	-1.5198	1.3171	0.6213	0
221	-0.0638	1	5	19	0.3573	0.4724	-0.8095	0.4343	-0.4396	0
222	-0.0638	1	5	19	0.3573	0.6486	-0.4094	0.5104	-0.3095	0
223	-0.0638	1	5	19	0.3573	0.4313	-0.9196	0.3927	-0.5096	0
224	0.0631	1	5	20	0.3555	1.3246	0.6713	1.0289	0.371	0
225	0.0631	1	5	20	0.3555	0.4436	-0.9096	0.3961	-0.4496	0
226	0.0631	1	5	20	0.3555	0.852	-0.0291	0.7038	0.0107	0
227	0.0631	1	5	20	0.3555	1.3246	0.6713	1.0289	0.371	0
228	0.0631	1	5	20	0.3555	0.2609	-1.4897	0.2381	-0.7898	0
229	0.0631	1	5	20	0.3555	1.2953	0.6413	1.0716	0.4111	0
230	0.1894	1	5	21	0.3556	1.5305	0.9315	1.3148	0.6213	0

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.ZSTD	
231	0.1894	1	5	21	0.3556	0.4063	-1.0196	0.3351	-0.4997	0
232	0.1894	1	5	21	0.3556	1.2365	0.5612	0.9531	0.311	0
233	0.3166	1	5	22	0.3579	0.4141	-0.9896	0.3535	-0.3996	0
234	0.3166	1	5	22	0.3579	1.7687	1.2018	1.3078	0.6313	0
235	0.4461	1	5	23	0.3625	0.3132	-1.2997	0.2902	-0.4497	0
236	0.4461	1	5	23	0.3625	0.7185	-0.2793	0.5443	-0.0595	0
237	0.4461	1	5	23	0.3625	1.2513	0.5813	1.0924	0.4711	0
238	0.4461	1	5	23	0.3625	0.9447	0.1209	0.8345	0.2508	0
239	0.58	1	5	24	0.3698	1.5643	0.9616	1.2219	0.5912	0
240	0.7204	1	5	25	0.3801	1.7401	1.1517	1.3025	0.6513	0
241	0.7204	1	5	25	0.3801	0.3826	-1.0396	0.3593	-0.1896	0
242	0.7204	1	5	25	0.3801	0.3826	-1.0396	0.3593	-0.1896	0
243	0.8701	1	5	26	0.3945	0.2379	-1.4898	0.1902	-0.4298	0
244	1.0332	1	5	27	0.4142	1.1736	0.4712	0.9028	0.4009	0
245	1.0332	1	5	27	0.4142	0.5138	-0.6495	0.452	-0.0195	0
246	1.2159	1	5	28	0.4421	0.8211	-0.0292	0.5825	0.1206	0
247	1.2159	1	5	28	0.4421	2.8417	1.9928	2.0754	1.0621	0
248	1.2159	1	5	28	0.4421	0.4437	-0.7596	0.3671	-0.1296	0
249	1.4288	1	5	29	0.4833	0.4441	-0.6796	0.3758	-0.1196	0
250	1.6929	1	5	30	0.5494	0.3825	-0.6796	0.2729	-0.2697	0
251	0.3183	1	5	22	0.3549	0.4952	-0.8395	0.5399	-0.6595	0
252	-2.6804	1	5	3	0.6633	0.6546	-0.0593	0.8488	0.2108	0
253	-2.6804	1	5	3	0.6633	1.2421	0.5612	1.1799	0.5212	0
254	-2.3228	1	5	4	0.5453	0.7022	-0.1593	0.7095	-0.0493	0
255	-2.0606	1	5	5	0.484	1.9601	1.322	2.6196	1.7026	0
256	-2.0606	1	5	5	0.484	0.3355	-1.0897	0.4432	-0.6396	0
257	-1.8451	1	5	6	0.4468	1.0908	0.3511	0.9657	0.181	0
258	-1.6572	1	5	7	0.4216	0.7355	-0.2493	0.7721	-0.1692	0
259	-1.6572	1	5	7	0.4216	0.6108	-0.5094	0.9658	0.161	0
260	-1.4875	1	5	8	0.4032	1.5507	0.9716	1.4259	0.8214	0
261	-1.4875	1	5	8	0.4032	2.7688	2.1728	2.8199	2.2428	0
262	-1.4875	1	5	8	0.4032	0.3681	-1.1696	0.623	-0.5194	0
263	-1.3306	1	5	9	0.3896	0.6676	-0.4193	0.6354	-0.4994	0
264	-1.1829	1	5	10	0.3795	1.2274	0.5512	1.1281	0.4011	0
265	-1.1829	1	5	10	0.3795	0.8787	-0.0091	0.9497	0.1209	0
266	-1.1829	1	5	10	0.3795	0.4273	-1.0196	0.3517	-1.2496	0
267	-1.0418	1	5	11	0.3722	1.4821	0.8815	2.1396	1.5921	0
268	-1.0418	1	5	11	0.3722	0.8912	0.0309	0.9873	0.191	0
269	-0.9053	1	5	12	0.3669	0.8906	0.0409	0.8229	-0.0692	0
270	-0.9053	1	5	12	0.3669	1.0547	0.3011	0.9384	0.1209	0
271	-0.9053	1	5	12	0.3669	0.0304	-2.97	0.0258	-3.03	0
272	-0.9053	1	5	12	0.3669	1.4539	0.8315	1.2392	0.5612	0
273	-0.9053	1	5	12	0.3669	1.6912	1.1017	1.5378	0.9315	0
274	-0.7723	1	5	13	0.3627	2.7238	1.9827	2.117	1.4921	0
275	-0.7723	1	5	13	0.3627	3.4248	2.4734	2.6774	1.9527	0
276	-0.7723	1	5	13	0.3627	0.7496	-0.1793	0.9857	0.201	0
277	-0.7723	1	5	13	0.3627	0.3309	-1.1397	0.4447	-0.8296	0
278	-0.6422	1	5	14	0.3586	1.6273	0.9916	1.9613	1.322	0
279	-0.6422	1	5	14	0.3586	2.3588	1.6524	1.8015	1.1718	0
280	-0.6422	1	5	14	0.3586	0.8765	0.0509	1.0746	0.3411	0
281	-0.6422	1	5	14	0.3586	0.2233	-1.4498	0.3212	-1.1397	0
282	-0.6422	1	5	14	0.3586	2.0548	1.3921	1.5803	0.9516	0
283	-0.6422	1	5	14	0.3586	2.5506	1.8026	2.2938	1.6123	0
284	-0.6422	1	5	14	0.3586	1.2385	0.5512	1.1483	0.4411	0
285	-0.5152	1	5	15	0.3541	0.5669	-0.4894	0.7892	-0.0992	0
286	-0.5152	1	5	15	0.3541	3.217	2.2532	2.526	1.7925	0
287	-0.5152	1	5	15	0.3541	0.273	-1.2497	0.3645	-0.9996	0
288	-0.5152	1	5	15	0.3541	3.1111	2.1831	2.4387	1.7224	0
289	-0.5152	1	5	15	0.3541	0.2033	-1.5098	0.203	-1.5498	0
290	-0.5152	1	5	15	0.3541	1.8201	1.1718	1.6058	0.9716	0
291	-0.3915	1	5	16	0.3493	0.2907	-1.2297	0.3767	-0.9896	0
292	-0.3915	1	5	16	0.3493	1.4321	0.7814	1.3256	0.6613	0
293	-0.3915	1	5	16	0.3493	0.3736	-0.9796	0.4857	-0.7095	0
294	-0.3915	1	5	16	0.3493	0.5087	-0.6395	0.5147	-0.6395	0
295	-0.3915	1	5	16	0.3493	2.1311	1.4721	1.9562	1.322	0
296	-0.3915	1	5	16	0.3493	1.4864	0.8415	1.1836	0.4812	0
297	-0.2711	1	5	17	0.3447	2.9142	2.1529	2.3133	1.6723	0
298	-0.2711	1	5	17	0.3447	0.9782	0.191	0.9365	0.1309	0
299	-0.2711	1	5	17	0.3447	1.1335	0.4111	0.8916	0.0509	0
300	-0.2711	1	5	17	0.3447	2.407	1.7624	1.9404	1.3319	0
301	-0.2711	1	5	17	0.3447	1.3115	0.6513	1.251	0.5713	0
302	-0.2711	1	5	17	0.3447	0.2081	-1.6198	0.2769	-1.3397	0
303	-0.2711	1	5	17	0.3447	0.1484	-1.8999	0.28	-1.3297	0
304	-0.2711	1	5	17	0.3447	1.403	0.7614	1.6568	1.0417	0
305	-0.1535	1	5	18	0.3412	1.4223	0.8114	1.4991	0.8815	0
306	-0.1535	1	5	18	0.3412	2.0088	1.462	1.5625	0.9616	0
307	-0.1535	1	5	18	0.3412	0.5716	-0.6094	0.6207	-0.4594	0
308	-0.1535	1	5	18	0.3412	0.5081	-0.7595	0.5344	-0.6495	0
309	-0.0378	1	5	19	0.3397	0.7299	-0.3093	0.7662	-0.1892	0
310	-0.0378	1	5	19	0.3397	0.8187	-0.1292	0.7436	-0.2293	0

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.ZSTD	
311	-0.0378	1	5	19	0.3397	1.0408	0.261	0.8544	-0.0291	0
312	-0.0378	1	5	19	0.3397	1.3196	0.6913	1.2403	0.5612	0
313	-0.0378	1	5	19	0.3397	0.8199	-0.1292	1.842	1.2818	0
314	-0.0378	1	5	19	0.3397	1.0571	0.2911	0.9425	0.1209	0
315	-0.0378	1	5	19	0.3397	0.7061	-0.3593	1.5439	0.9515	0
316	-0.0378	1	5	19	0.3397	1.4114	0.8214	1.4353	0.8214	0
317	-0.0378	1	5	19	0.3397	1.2836	0.6413	1.1183	0.3911	0
318	0.0779	1	5	20	0.3411	0.993	0.181	0.8396	-0.0592	0
319	0.0779	1	5	20	0.3411	0.6399	-0.5494	0.6251	-0.4894	0
320	0.0779	1	5	20	0.3411	0.6533	-0.5093	0.5548	-0.6494	0
321	0.0779	1	5	20	0.3411	0.4471	-1.0596	0.4736	-0.8495	0
322	0.0779	1	5	20	0.3411	1.4544	0.8915	1.29	0.6313	0
323	0.0779	1	5	20	0.3411	1.1636	0.4612	1.0731	0.3211	0
324	0.0779	1	5	20	0.3411	0.993	0.181	0.8396	-0.0592	0
325	0.0779	1	5	20	0.3411	1.3697	0.7814	1.1328	0.4111	0
326	0.1957	1	5	21	0.346	1.196	0.5112	1.0218	0.241	0
327	0.1957	1	5	21	0.346	1.0509	0.2811	1.1277	0.4011	0
328	0.1957	1	5	21	0.346	0.4912	-0.9195	0.4541	-0.8995	0
329	0.1957	1	5	21	0.346	4.4053	3.5644	3.3913	2.6134	0
330	0.1957	1	5	21	0.346	1.4058	0.8214	1.3759	0.7514	0
331	0.1957	1	5	21	0.346	0.5871	-0.6694	0.5186	-0.7295	0
332	0.1957	1	5	21	0.346	3.8283	3.1638	3.8552	2.9339	0
333	0.1957	1	5	21	0.346	3.0001	2.523	2.2838	1.7323	0
334	0.1957	1	5	21	0.346	2.0631	1.6321	1.8724	1.3219	0
335	0.3183	1	5	22	0.3549	1.4029	0.8014	1.5919	1.0016	0
336	0.3183	1	5	22	0.3549	0.2683	-1.5697	0.2888	-1.3697	0
337	0.3183	1	5	22	0.3549	0.6658	-0.4293	0.6006	-0.5194	0
338	0.3183	1	5	22	0.3549	0.3284	-1.3397	0.4755	-0.8095	0
339	0.3183	1	5	22	0.3549	0.8871	0.0109	1.0037	0.221	0
340	0.3183	1	5	22	0.3549	1.7749	1.2518	1.5933	1.0016	0
341	0.3183	1	5	22	0.3549	1.6632	1.1217	1.6023	1.0116	0
342	0.3183	1	5	22	0.3549	0.2736	-1.5497	0.4324	-0.9296	0
343	0.3183	1	5	22	0.3549	1.3076	0.6713	1.1734	0.4712	0
344	0.3183	1	5	22	0.3549	3.3373	2.6633	2.9143	2.2229	0
345	0.3183	1	5	22	0.3549	0.2982	-1.4497	0.3016	-1.3297	0
346	0.3183	1	5	22	0.3549	0.2736	-1.5497	0.4324	-0.9296	0
347	0.4487	1	5	23	0.3681	0.267	-1.3997	0.5005	-0.6995	0
348	0.4487	1	5	23	0.3681	0.9346	0.1209	0.7989	-0.0992	0
349	0.4487	1	5	23	0.3681	1.1247	0.4011	1.0048	0.231	0
350	0.4487	1	5	23	0.3681	1.1301	0.4111	0.9625	0.171	0
351	0.4487	1	5	23	0.3681	0.6977	-0.2993	0.6103	-0.4594	0
352	0.4487	1	5	23	0.3681	0.6977	-0.2993	0.6103	-0.4594	0
353	0.4487	1	5	23	0.3681	1.0935	0.3611	1.1658	0.4612	0
354	0.4487	1	5	23	0.3681	1.1301	0.4111	0.9625	0.171	0
355	0.4487	1	5	23	0.3681	1.2001	0.5112	1.1063	0.3811	0
356	0.4487	1	5	23	0.3681	0.9286	0.1109	2.468	1.8025	0
357	0.4487	1	5	23	0.3681	0.9155	0.0909	0.823	-0.0592	0
358	0.5904	1	5	24	0.3853	1.0027	0.241	0.8271	-0.0192	0
359	0.5904	1	5	24	0.3853	0.2187	-1.4098	0.2409	-1.3398	0
360	0.5904	1	5	24	0.3853	0.6661	-0.2893	0.6051	-0.4094	0
361	0.5904	1	5	24	0.3853	1.1521	0.4412	1.2673	0.5813	0
362	0.5904	1	5	24	0.3853	1.0027	0.241	0.8271	-0.0192	0
363	0.5904	1	5	24	0.3853	1.2595	0.5713	1.1529	0.4412	0
364	0.5904	1	5	24	0.3853	0.3009	-1.1297	0.5939	-0.4294	0
365	0.5904	1	5	24	0.3853	1.6633	1.0117	1.4489	0.7914	0
366	0.5904	1	5	24	0.3853	0.3846	-0.8896	0.3814	-0.9096	0
367	0.5904	1	5	24	0.3853	1.0581	0.3211	0.8844	0.0709	0
368	0.5904	1	5	24	0.3853	0.6066	-0.3994	0.5795	-0.4594	0
369	0.5904	1	5	24	0.3853	1.0581	0.3211	0.8844	0.0709	0
370	0.5904	1	5	24	0.3853	0.1632	-1.6398	0.198	-1.4998	0
371	0.7467	1	5	25	0.4057	0.4198	-0.7096	0.7861	-0.0292	0
372	0.7467	1	5	25	0.4057	1.8628	1.1519	1.8362	1.1118	0
373	0.7467	1	5	25	0.4057	0.092	-1.8599	0.1264	-1.6199	0
374	0.7467	1	5	25	0.4057	1.9149	1.1919	1.5573	0.8716	0
375	0.7467	1	5	25	0.4057	1.6417	0.9516	1.681	0.9817	0
376	0.7467	1	5	25	0.4057	1.0441	0.311	0.8372	0.0508	0
377	0.7467	1	5	25	0.4057	1.9149	1.1919	1.5573	0.8716	0
378	0.7467	1	5	25	0.4057	2.5188	1.6525	2.2973	1.4723	0
379	0.7467	1	5	25	0.4057	0.1655	-1.4798	0.5714	-0.3794	0
380	0.9204	1	5	26	0.4279	0.0788	-1.8499	0.1045	-1.4399	0
381	0.9204	1	5	26	0.4279	0.8002	0.0008	0.6302	-0.1694	0
382	0.9204	1	5	26	0.4279	2.4185	1.5424	2.8449	1.6828	0
383	0.9204	1	5	26	0.4279	0.6951	-0.1593	0.4871	-0.3995	0
384	0.9204	1	5	26	0.4279	0.5722	-0.3594	0.5234	-0.3395	0
385	0.9204	1	5	26	0.4279	1.9184	1.1719	2.4845	1.4725	0
386	0.9204	1	5	26	0.4279	2.5279	1.6225	2.7896	1.6528	0
387	0.9204	1	5	26	0.4279	1.5546	0.8616	1.1498	0.4611	0
388	0.9204	1	5	26	0.4279	0.0788	-1.8499	0.1045	-1.4399	0
389	0.9204	1	5	26	0.4279	0.3221	-0.8997	0.357	-0.6596	0
390	0.9204	1	5	26	0.4279	0.5679	-0.3694	0.448	-0.4696	0

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.ZSTD	
391	0.9204	1	5	26	0.4279	0.0788	-1.8499	0.1045	-1.4399	0
392	0.9204	1	5	26	0.4279	0.3057	-0.9397	0.824	0.1008	0
393	0.9204	1	5	26	0.4279	0.3057	-0.9397	0.824	0.1008	0
394	0.9204	1	5	26	0.4279	1.8023	1.0818	2.4348	1.4424	0
395	0.9204	1	5	26	0.4279	0.0788	-1.8499	0.1045	-1.4399	0
396	0.9204	1	5	26	0.4279	2.4185	1.5424	2.8449	1.6828	0
397	1.1135	1	5	27	0.4513	0.5554	-0.3894	0.3766	-0.3996	0
398	1.1135	1	5	27	0.4513	3.0847	1.9631	2.4543	1.3225	0
399	1.1135	1	5	27	0.4513	0.3607	-0.7996	0.3213	-0.5097	0
400	1.1135	1	5	27	0.4513	1.6553	0.9517	1.7475	0.9317	0
401	1.1135	1	5	27	0.4513	0.2557	-1.0897	0.2351	-0.6898	0
402	1.1135	1	5	27	0.4513	2.49	1.5925	1.4581	0.7315	0
403	1.1135	1	5	27	0.4513	1.6553	0.9517	1.7475	0.9317	0
404	1.3294	1	5	28	0.4789	0.387	-0.7596	1.227	0.6112	0
405	1.3294	1	5	28	0.4789	0.129	-1.6099	0.156	-0.5598	0
406	1.3294	1	5	28	0.4789	0.129	-1.6099	0.156	-0.5598	0
407	1.3294	1	5	28	0.4789	0.3148	-0.9397	1.1985	0.5912	0
408	1.3294	1	5	28	0.4789	0.129	-1.6099	0.156	-0.5598	0
409	1.3294	1	5	28	0.4789	0.1536	-1.4898	0.1712	-0.5198	0
410	1.3294	1	5	28	0.4789	1.2153	0.5212	0.7153	0.2207	0
411	1.3294	1	5	28	0.4789	0.129	-1.6099	0.156	-0.5598	0
412	1.3294	1	5	28	0.4789	1.2399	0.5512	1.0975	0.5311	0
413	1.3294	1	5	28	0.4789	0.2258	-1.2098	0.1997	-0.4498	0
414	1.3294	1	5	28	0.4789	0.1536	-1.4898	0.1712	-0.5198	0
415	1.3294	1	5	28	0.4789	0.5154	-0.4895	0.3337	-0.2197	0
416	1.3294	1	5	28	0.4789	1.2399	0.5512	1.0975	0.5311	0
417	1.3294	1	5	28	0.4789	1.819	1.1018	0.9985	0.461	0
418	1.3294	1	5	28	0.4789	1.0954	0.3811	1.1153	0.5411	0
419	1.5769	1	5	29	0.5193	0.6944	-0.1493	0.4792	0.0105	0
420	1.5769	1	5	29	0.5193	1.2722	0.5813	0.6735	0.2107	0
421	1.5769	1	5	29	0.5193	1.3138	0.6213	0.7701	0.2908	0
422	1.5769	1	5	29	0.5193	2.692	1.7127	3.5619	1.5936	0
423	1.5769	1	5	29	0.5193	1.3138	0.6213	0.7701	0.2908	0
424	1.5769	1	5	29	0.5193	0.1411	-1.4999	0.2223	-0.3598	0
425	1.5769	1	5	29	0.5193	0.8302	0.0508	1.7459	0.9017	0
426	1.5769	1	5	29	0.5193	1.3138	0.6213	0.7701	0.2908	0
427	1.5769	1	5	29	0.5193	3.4853	2.1835	1.8907	0.9719	0
428	1.5769	1	5	29	0.5193	0.2072	-1.2398	0.1615	-0.4898	0
429	1.5769	1	5	29	0.5193	0.2211	-1.1898	0.1937	-0.4198	0
430	1.5769	1	5	29	0.5193	3.7714	2.3238	9.9	3.5899	0
431	1.5769	1	5	29	0.5193	3.7714	2.3238	9.9	3.5899	0
432	1.5769	1	5	29	0.5193	0.2072	-1.2398	0.1615	-0.4898	0
433	1.5769	1	5	29	0.5193	1.4907	0.8015	6.6018	2.3366	0
434	1.5769	1	5	29	0.5193	3.2181	2.0332	9.9	3.5699	0
435	1.5769	1	5	29	0.5193	1.3138	0.6213	0.7701	0.2908	0
436	1.5769	1	5	29	0.5193	0.2072	-1.2398	0.1615	-0.4898	0
437	1.8817	1	5	30	0.5921	0.6687	-0.0893	0.3977	-0.0896	0
438	1.8817	1	5	30	0.5921	0.838	0.1308	0.4367	-0.0396	0
439	1.8817	1	5	30	0.5921	0.838	0.1308	0.4367	-0.0396	0
440	1.8817	1	5	30	0.5921	0.838	0.1308	0.4367	-0.0396	0
441	1.8817	1	5	30	0.5921	0.838	0.1308	0.4367	-0.0396	0
442	1.8817	1	5	30	0.5921	0.5209	-0.3195	2.1074	1.0721	0
443	1.8817	1	5	30	0.5921	0.838	0.1308	0.4367	-0.0396	0
444	1.8817	1	5	30	0.5921	4.4923	2.4045	9.9	5.2799	0
445	1.8817	1	5	30	0.5921	0.4864	-0.3795	0.5516	0.0906	0
446	1.8817	1	5	30	0.5921	0.4018	-0.5296	0.4729	0.0005	0
447	1.8817	1	5	30	0.5921	0.6687	-0.0893	0.3977	-0.0896	0
448	2.3182	1	5	31	0.7484	0.1807	-0.6698	0.1271	-0.5799	0
449	2.3182	1	5	31	0.7484	0.7002	0.1307	3.288	1.5033	0
450	2.3182	1	5	31	0.7484	0.7002	0.1307	3.288	1.5033	0
451	2.3182	1	5	31	0.7484	0.7002	0.1307	3.288	1.5033	0
452	2.3182	1	5	31	0.7484	0.4781	-0.1395	0.2492	-0.3198	0
453	2.3182	1	5	31	0.7484	0.5883	0.0006	0.9275	0.4209	0
454	2.3182	1	5	31	0.7484	0.4781	-0.1395	0.2492	-0.3198	0
455	3.1806	1	5	32	1.1658	0.1488	-0.5299	0.081	-0.7299	0
456	3.1806	1	5	32	1.1658	0.1488	-0.5299	0.081	-0.7299	0
457	3.1806	1	5	32	1.1658	0.1488	-0.5299	0.081	-0.7299	0
458	3.1806	1	5	32	1.1658	0.1488	-0.5299	0.081	-0.7299	0
459	3.1806	1	5	32	1.1658	2.0679	1.0521	8.0213	2.608	0
460	3.1806	1	5	32	1.1658	0.1488	-0.5299	0.081	-0.7299	0
461	3.1806	1	5	32	1.1658	0.1488	-0.5299	0.081	-0.7299	0
462	4.768	0	5	33	2.0023	1	0	1	0	0
463	4.768	0	5	33	2.0023	1	0	1	0	0
464	4.768	0	5	33	2.0023	1	0	1	0	0
465	-4.1153	1	5	1	1.1215	0.3076	-0.2197	0.1711	-0.4698	0
466	-3.3059	1	5	2	0.7185	0.5406	0.0705	0.3236	-0.1897	0
467	-2.6482	1	5	4	0.4886	0.4272	-0.8196	0.7718	0.1608	0
468	-2.4222	1	5	5	0.4669	0.1751	-1.6498	0.3476	-0.4997	0
469	-2.4222	1	5	5	0.4669	0.6248	-0.3894	1.5823	0.8216	0
470	-2.2066	1	5	6	0.4629	0.2984	-0.8597	0.975	0.301	0

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.ZSTD	
471	-2.2066	1	5	6	0.4629	4.8259	2.6848	4.2586	2.2443	0
472	-1.9951	1	5	7	0.4543	3.0354	1.673	2.8265	1.6828	0
473	-1.9951	1	5	7	0.4543	0.5168	-0.2495	0.4903	-0.3995	0
474	-1.9951	1	5	7	0.4543	0.5478	-0.2095	1.0001	0.301	0
475	-1.7992	1	5	8	0.4279	2.9712	1.623	2.8585	1.7629	0
476	-1.7992	1	5	8	0.4279	0.4835	-0.2795	0.8652	0.1209	0
477	-1.7992	1	5	8	0.4279	0.4771	-0.2895	0.4582	-0.5195	0
478	-1.7992	1	5	8	0.4279	0.3062	-0.5997	0.2744	-0.9497	0
479	-1.7992	1	5	8	0.4279	2.275	1.2623	1.5121	0.8015	0
480	-1.6306	1	5	9	0.3932	0.531	-0.2995	0.7168	-0.0993	0
481	-1.6306	1	5	9	0.3932	1.0165	0.331	2.7514	1.7328	0
482	-1.6306	1	5	9	0.3932	0.3641	-0.5996	0.4761	-0.5195	0
483	-1.6306	1	5	9	0.3932	0.4309	-0.4696	0.6052	-0.2794	0
484	-1.6306	1	5	9	0.3932	0.5727	-0.2294	0.7647	-0.0292	0
485	-1.6306	1	5	9	0.3932	0.7311	0.0007	0.6964	-0.1293	0
486	-1.6306	1	5	9	0.3932	1.4018	0.6914	0.8893	0.1409	0
487	-1.4878	1	5	10	0.3638	0.6941	-0.1793	0.988	0.261	0
488	-1.4878	1	5	10	0.3638	0.7467	-0.0893	0.5931	-0.2994	0
489	-1.4878	1	5	10	0.3638	1.1579	0.4512	1.1093	0.4011	0
490	-1.4878	1	5	10	0.3638	0.185	-1.3798	0.4962	-0.4795	0
491	-1.4878	1	5	10	0.3638	0.6089	-0.3194	0.6088	-0.2694	0
492	-1.3629	1	5	11	0.3448	0.9262	0.1009	0.7427	-0.0493	0
493	-1.3629	1	5	11	0.3448	0.2766	-1.4097	0.6354	-0.2194	0
494	-1.3629	1	5	11	0.3448	0.4305	-0.9196	0.4066	-0.6396	0
495	-1.3629	1	5	11	0.3448	0.5065	-0.7295	0.7299	-0.0693	0
496	-1.3629	1	5	11	0.3448	0.4186	-0.9596	0.5789	-0.3094	0
497	-1.3629	1	5	11	0.3448	0.2126	-1.6598	0.3377	-0.7997	0
498	-1.2475	1	5	12	0.3361	0.1893	-2.0498	0.2351	-1.0298	0
499	-1.2475	1	5	12	0.3361	0.501	-0.8895	0.69	-0.1093	0
500	-1.2475	1	5	12	0.3361	0.1689	-2.1598	0.3059	-0.8397	0
501	-1.2475	1	5	12	0.3361	1.8625	1.4019	1.8894	1.1119	0
502	-1.2475	1	5	12	0.3361	0.1893	-2.0498	0.2351	-1.0298	0
503	-1.2475	1	5	12	0.3361	0.8306	-0.1192	1.027	0.321	0
504	-1.1349	1	5	13	0.3366	1.2739	0.6213	0.9545	0.251	0
505	-1.1349	1	5	13	0.3366	0.8344	-0.0992	0.8123	0.0808	0
506	-1.1349	1	5	13	0.3366	0.3742	-1.2096	0.5193	-0.3495	0
507	-1.1349	1	5	13	0.3366	0.9498	0.1109	0.6829	-0.0993	0
508	-1.1349	1	5	13	0.3366	2.6639	2.1527	1.9226	1.1119	0
509	-1.1349	1	5	13	0.3366	1.1458	0.4311	1.3918	0.6914	0
510	-1.1349	1	5	13	0.3366	2.3454	1.8623	1.6008	0.8716	0
511	-1.019	1	5	14	0.3455	0.9804	0.201	0.8488	0.1408	0
512	-1.019	1	5	14	0.3455	0.729	-0.2093	0.5128	-0.3195	0
513	-1.019	1	5	14	0.3455	0.0659	-2.3699	0.1953	-1.0298	0
514	-1.019	1	5	14	0.3455	0.9804	0.201	0.8488	0.1408	0
515	-1.019	1	5	14	0.3455	1.471	0.8315	1.4751	0.7515	0
516	-0.8943	1	5	15	0.3618	0.7086	-0.1393	0.6498	-0.0694	0
517	-0.8943	1	5	15	0.3618	0.5106	-0.4895	0.4628	-0.3495	0
518	-0.8943	1	5	15	0.3618	0.3478	-0.8497	0.3275	-0.6097	0
519	-0.8943	1	5	15	0.3618	0.7086	-0.1393	0.6498	-0.0694	0
520	-0.8943	1	5	15	0.3618	0.3478	-0.8497	0.3275	-0.6097	0
521	-0.8943	1	5	15	0.3618	0.7086	-0.1393	0.6498	-0.0694	0
522	-0.8943	1	5	15	0.3618	0.6465	-0.2394	0.5723	-0.1794	0
523	-0.8943	1	5	15	0.3618	0.5106	-0.4895	0.4628	-0.3495	0
524	-0.8943	1	5	15	0.3618	0.7086	-0.1393	0.6498	-0.0694	0
525	-0.8943	1	5	15	0.3618	1.2706	0.5813	1.814	0.9918	0
526	-0.7557	1	5	16	0.3832	0.3326	-0.7597	0.3617	-0.4596	0
527	-0.7557	1	5	16	0.3832	0.7881	0.0308	1.4002	0.6914	0
528	-0.7557	1	5	16	0.3832	0.2259	-1.0398	0.2793	-0.6297	0
529	-0.7557	1	5	16	0.3832	1.1876	0.4912	0.9297	0.2909	0
530	-0.7557	1	5	16	0.3832	2.3626	1.4324	2.186	1.2022	0
531	-0.6001	1	5	17	0.4057	0.1447	-1.2799	0.2517	-0.5797	0
532	-0.6001	1	5	17	0.4057	0.9275	0.2209	1.1616	0.5212	0
533	-0.6001	1	5	17	0.4057	0.2069	-1.0598	0.1863	-0.7298	0
534	-0.6001	1	5	17	0.4057	0.4504	-0.4795	0.3716	-0.3496	0
535	-0.6001	1	5	17	0.4057	0.3202	-0.7497	0.2666	-0.5397	0
536	-0.6001	1	5	17	0.4057	0.2069	-1.0598	0.1863	-0.7298	0
537	-0.6001	1	5	17	0.4057	1.1542	0.4612	1.3375	0.6513	0
538	-0.6001	1	5	17	0.4057	0.3606	-0.6596	0.3893	-0.3196	0
539	-0.6001	1	5	17	0.4057	0.3202	-0.7497	0.2666	-0.5397	0
540	-0.6001	1	5	17	0.4057	1.2349	0.5412	0.9478	0.3409	0
541	-0.6001	1	5	17	0.4057	0.5872	-0.2394	0.5349	-0.1095	0
542	-0.6001	1	5	17	0.4057	0.1447	-1.2799	0.2517	-0.5797	0
543	-0.4269	1	5	18	0.4259	0.7903	0.0308	0.6402	0.1006	0
544	-0.4269	1	5	18	0.4259	2.1268	1.2721	1.4047	0.7114	0
545	-0.4269	1	5	18	0.4259	0.7903	0.0308	0.6402	0.1006	0
546	-0.4269	1	5	18	0.4259	0.2391	-0.9998	1.6556	0.8617	0
547	-0.4269	1	5	18	0.4259	0.7903	0.0308	0.6402	0.1006	0
548	-0.4269	1	5	18	0.4259	1.6887	0.9417	2.0683	1.0721	0
549	-0.4269	1	5	18	0.4259	0.5714	-0.2894	0.379	-0.2296	0
550	-0.4269	1	5	18	0.4259	1.7651	1.0118	1.7062	0.8817	0

ENTRY	MEASURE	STATUS	COUNT	SCORE	MODLSE	IN.MSQ	IN.ZSTD	OUT.MSQ	OUT.ZSTD	
551	-0.4269	1	5	18	0.4259	0.7349	-0.0393	0.9009	0.3409	0
552	-0.4269	1	5	18	0.4259	1.2316	0.5412	1.1468	0.5311	0
553	-0.238	1	5	19	0.443	2.758	1.7128	1.5138	0.7915	0
554	-0.238	1	5	19	0.443	0.1932	-1.2098	0.1364	-0.5599	0
555	-0.238	1	5	19	0.443	0.0883	-1.6799	0.0731	-0.7599	0
556	-0.238	1	5	19	0.443	0.4781	-0.4895	0.4686	0.0005	0
557	-0.238	1	5	19	0.443	0.1932	-1.2098	0.1364	-0.5599	0
558	-0.238	1	5	19	0.443	1.5588	0.8516	2.004	1.022	0
559	-0.238	1	5	19	0.443	0.6121	-0.2494	2.5671	1.2526	0
560	-0.0345	1	5	20	0.4593	1.0993	0.3911	0.8207	0.3408	0
561	-0.0345	1	5	20	0.4593	0.5162	-0.4295	0.2908	-0.2397	0
562	-0.0345	1	5	20	0.4593	0.3359	-0.8097	0.4071	-0.0796	0
563	-0.0345	1	5	20	0.4593	0.014	-2.43	0.0261	-1.02	0
564	-0.0345	1	5	20	0.4593	0.4162	-0.6296	0.4285	-0.0496	0
565	-0.0345	1	5	20	0.4593	1.4598	0.7615	1.0553	0.5111	0
566	-0.0345	1	5	20	0.4593	0.3556	-0.7596	0.1965	-0.4198	0
567	-0.0345	1	5	20	0.4593	0.3359	-0.8097	0.4071	-0.0796	0
568	-0.0345	1	5	20	0.4593	0.5162	-0.4295	0.2908	-0.2397	0
569	-0.0345	1	5	20	0.4593	0.014	-2.43	0.0261	-1.02	0
570	0.1845	1	5	21	0.4768	0.3921	-0.6496	0.4421	-0.0296	0
571	0.1845	1	5	21	0.4768	4.1138	2.3941	9.9	2.9599	0
572	0.1845	1	5	21	0.4768	0.3921	-0.6496	0.4421	-0.0296	0
573	0.1845	1	5	21	0.4768	1.0832	0.3811	0.5755	0.1106	0
574	0.1845	1	5	21	0.4768	0.7186	-0.0793	0.4953	0.0305	0
575	0.1845	1	5	21	0.4768	0.3921	-0.6496	0.4421	-0.0296	0
576	0.1845	1	5	21	0.4768	0.1374	-1.4099	0.0868	-0.7099	0
577	0.4208	1	5	22	0.4954	1.3586	0.6614	0.7428	0.2707	0
578	0.4208	1	5	22	0.4954	0.024	-2.1	0.0333	-0.97	0
579	0.4208	1	5	22	0.4954	1.3586	0.6614	0.7428	0.2707	0
580	0.4208	1	5	22	0.4954	0.6813	-0.1093	0.5764	0.1206	0
581	0.4208	1	5	22	0.4954	0.6813	-0.1093	0.5764	0.1206	0
582	0.4208	1	5	22	0.4954	0.3195	-0.7697	0.274	-0.2697	0
583	0.4208	1	5	22	0.4954	0.024	-2.1	0.0333	-0.97	0
584	0.6749	1	5	23	0.5121	0.2751	-0.8597	0.1958	-0.4198	0
585	0.6749	1	5	23	0.5121	0.1611	-1.2198	0.1071	-0.6399	0
586	0.6749	1	5	23	0.5121	2.3014	1.3723	1.3486	0.6913	0
587	0.6749	1	5	23	0.5121	1.2461	0.5512	0.829	0.3408	0
588	0.6749	1	5	23	0.5121	0.8355	0.1108	0.6914	0.2307	0
589	0.6749	1	5	23	0.5121	0.1252	-1.3599	0.0998	-0.6699	0
590	0.6749	1	5	23	0.5121	0.1252	-1.3599	0.0998	-0.6699	0
591	0.6749	1	5	23	0.5121	0.8355	0.1108	0.6914	0.2307	0
592	0.9437	1	5	24	0.524	0.091	-1.6199	0.0696	-0.7799	0
593	0.9437	1	5	24	0.524	2.2437	1.3622	1.6401	0.8516	0
594	0.9437	1	5	24	0.524	0.9788	0.261	0.6585	0.2007	0
595	1.8314	1	5	27	0.5826	1.4849	0.8415	0.8233	0.3408	0
596	1.8314	1	5	27	0.5826	0.4811	-0.6995	0.2655	-0.2897	0
597	2.2133	1	5	28	0.6646	1.3299	0.6413	0.8087	0.3308	0

Appendix D: Speaking examinees measurement report (arranged by N)

Total Score	Total Count	Obsvd Average	Fair(M) Average	Measure	Model S.E.	Infit MnSq	Infit ZStd	Outfit MnSq	Outfit ZStd	Estim. Discrm	Correlation PtMea	Correlation PtExp	Num examinees
4	9	.44	.18	-4.15	.54	.38	-1.0	.43	-.8	1.25	.54	.39	1 1
34	9	3.78	3.03	-.41	.34	.79	-.3	1.00	.1	.67	.55	.48	2 2
34	9	3.78	3.03	-.41	.34	.34	-1.7	.38	-1.4	1.32	.86	.48	3 3
8	9	.89	.44	-3.11	.40	.52	-.9	.54	-.9	1.18	.90	.46	4 4
1	9	.11	.04	-5.65	1.02	1.01	.3	1.08	.5	.94	-.30	.22	5 5
1	8	.13	.06	-5.36	1.02	1.03	.3	1.01	.4	.86	.27	.22	6 6
2	9	.22	.09	-4.92	.73	.71	-.1	.67	.0	1.11	.14	.30	7 7
14	9	1.56	.79	-2.48	.34	1.68	1.3	1.62	1.2	.27	.89	.61	8 8
13	8	1.63	.92	-2.27	.36	.60	-.7	.55	-.8	1.35	.77	.59	9 9
16	8	2.00	1.21	-1.91	.34	.65	-.6	.71	-.4	1.12	.34	.61	10 10
26	10	2.60	1.72	-1.42	.29	.77	-.4	.94	.0	.81	.92	.62	11 11
5	9	.56	.28	-3.71	.49	1.32	.6	1.10	.3	.96	-.22	.39	12 12
3	8	.38	.17	-4.18	.61	.90	.0	.70	-.1	1.24	.58	.35	13 13
11	8	1.38	.66	-2.63	.37	.64	-.6	.67	-.5	1.70	.91	.54	14 14
31	10	3.10	2.27	-.96	.28	.80	-.4	.87	-.1	1.39	.80	.52	15 15
41	11	3.73	3.30	.02	.43	1.82	1.5	1.76	1.4	.62	.53	.69	16 16
29	10	2.90	2.06	-1.12	.28	.92	.0	1.04	.2	1.11	.69	.54	17 17
20	9	2.22	1.48	-2.43	.36	1.29	.7	1.39	.9	.12	.35	.34	18 18
44	11	4.00	3.68	.57	.44	.60	-.9	.59	-.9	1.40	.70	.66	19 19
22	10	2.20	1.40	-1.70	.30	.39	-1.6	.37	-1.6	1.54	.81	.59	20 20
16	8	2.00	1.21	-1.91	.34	.86	-.1	.79	-.2	.67	.58	.61	21 21
29	10	2.90	2.06	-1.12	.28	.57	-1.1	.64	-.8	1.70	.68	.54	22 22
22	8	2.75	1.89	-1.27	.32	1.15	.4	1.32	.7	1.16	.44	.59	23 23
40	9	4.44	4.25	1.58	.57	1.27	.6	1.02	.2	1.05	.76	.56	24 24
57	11	5.18	4.92	(4.48	1.87)	Maximum					.00	.00	25 25
23	8	2.88	2.02	-1.16	.32	.74	-.4	.87	-.1	1.13	.41	.58	26 26
37	9	4.11	3.91	1.04	.48	1.75	1.4	1.51	1.0	.56	.54	.62	27 27
22	10	2.20	1.40	-1.70	.30	1.22	.6	1.14	.4	.67	.68	.59	28 28
34	9	3.78	3.18	-.30	.34	1.66	1.3	1.47	.9	.75	.45	.45	29 29
29	10	2.90	2.06	-1.12	.28	.70	-.7	.91	.0	1.27	.61	.54	30 30
21	9	2.33	1.55	-1.55	.31	1.28	.7	1.26	.6	.68	.46	.60	31 31
26	8	3.25	2.62	-.85	.46	.77	-.2	.88	.0	1.08	.63	.67	32 32
34	10	3.40	2.69	-.81	.41	.94	.0	.89	.0	1.11	.57	.65	33 33
32	9	3.56	3.02	-.41	.46	.89	.0	.92	.0	1.01	.44	.67	34 34
31	8	3.88	3.55	.35	.51	1.02	.2	1.11	.3	.86	.57	.69	35 35
34	10	3.40	2.91	-.45	.44	.65	-.5	.59	-.6	1.27	.70	.70	36 36
20	8	2.50	1.80	-1.92	.40	.48	-1.1	.45	-1.2	1.55	.74	.50	37 37
38	8	4.75	4.65	2.85	.81	.93	.1	2.37	1.3	.67	.11	.41	38 38
30	11	2.73	1.95	-1.65	.35	1.80	1.6	2.06	1.9	-.02	.49	.57	39 39
29	8	3.63	3.18	-.16	.50	1.83	1.3	2.18	1.6	.48	.35	.70	40 40
31	9	3.44	3.02	-.28	.46	1.39	.8	1.40	.8	.82	.40	.71	41 41
29	9	3.22	2.55	-.98	.42	.77	-.3	.69	-.4	1.46	.53	.62	42 42
21	8	2.63	1.91	-1.76	.41	.70	-.5	.60	-.7	1.14	.34	.53	43 43
15	8	1.88	1.29	-2.72	.40	1.60	1.1	1.38	.8	.60	.36	.32	44 44
32	9	3.56	3.02	-.41	.46	.64	-.5	.69	-.4	1.33	.63	.67	45 45
25	9	2.78	2.05	-1.63	.39	1.63	1.3	1.66	1.3	.32	.02	.52	46 46
13	8	1.63	1.11	-3.06	.41	.61	-.7	.68	-.6	1.72	-.40	.25	47 47
17	8	2.13	1.48	-2.40	.40	.79	-.2	.62	-.7	1.55	.41	.40	48 48
26	8	3.25	2.62	-.85	.46	1.20	.5	1.33	.7	.92	.30	.67	49 49
17	8	2.13	1.48	-2.40	.40	.82	-.2	.67	-.6	1.34	.57	.40	50 50
15	4	3.75	4.03	1.46	.70	1.43	.7	1.40	.7	.51	-.55	.59	51 51
16	4	4.00	4.22	2.02	.79	1.30	.6	1.10	.3	.71	.81	.53	52 52
16	4	4.00	4.22	2.02	.79	.84	.0	.97	.2	.95	.08	.53	53 53
18	4	4.50	4.60	3.75	1.14	.88	.1	.74	.0	1.14	-.09	.30	54 54
18	4	4.50	4.60	3.75	1.14	.92	.1	.76	.1	1.06	.80	.30	55 55
16	4	4.00	4.22	2.02	.79	.09	-1.6	.13	-1.5	1.91	.92	.53	56 56
15	4	3.75	4.03	1.46	.70	.38	-.7	.36	-.8	1.54	.98	.59	57 57
17	4	4.25	4.42	2.74	.91	2.28	1.4	2.10	1.3	-.38	-.09	.44	58 58
14	4	3.50	3.85	1.02	.63	.34	-.9	.31	-1.0	1.49	.33	.64	59 59
15	4	3.75	4.03	1.46	.70	.47	-.5	.47	-.5	1.31	.69	.59	60 60
17	4	4.25	4.42	2.74	.91	.58	-.3	.51	-.4	1.57	.02	.44	61 61
18	4	4.50	4.60	3.75	1.14	.83	.0	.68	.0	1.20	.11	.30	62 62
14	4	3.50	3.85	1.02	.63	.34	-.9	.31	-1.0	1.49	.33	.64	63 63
17	4	4.25	4.42	2.74	.91	.56	-.4	.52	-.4	1.48	.85	.44	64 64
16	4	4.00	4.22	2.02	.79	.09	-1.6	.13	-1.5	1.91	.92	.53	65 65
20	4	5.00	4.93	(4.78	1.93)	Maximum					.00	.00	66 66
14	4	3.50	3.85	1.02	.63	.34	-.9	.31	-1.0	1.49	.33	.64	67 67
18	4	4.50	4.60	3.75	1.14	1.50	.8	3.64	1.8	-.07	-.82	.30	68 68
17	4	4.25	4.42	2.74	.91	.58	-.3	.51	-.4	1.57	.02	.44	69 69

Total Score	Total Count	Obsvd Average	Fair(M) Average	Model Measure	S.E.	Infit MnSq	ZStd	Outfit MnSq	ZStd	Estim. Discrm	Correlation PtMea	PtExp	Num examinees
15	4	3.75	4.03	1.46	.70	1.43	.7	1.40	.7	.51	-.55	.59	70 70
15	4	3.75	4.03	1.46	.70	.38	-.7	.36	-.8	1.54	.98	.59	71 71
14	4	3.50	3.85	1.02	.63	1.24	.5	1.11	.3	1.20	.50	.64	72 72
17	4	4.25	4.42	2.74	.91	.58	-.3	.51	-.4	1.57	.02	.44	73 73
16	4	4.00	4.22	2.02	.79	1.39	.6	1.20	.5	.56	.07	.53	74 74
14	4	3.50	3.85	1.02	.63	2.38	1.6	2.08	1.3	-.16	.05	.64	75 75
16	4	4.00	4.22	2.02	.79	.09	-1.6	.13	-1.5	1.91	.92	.53	76 76
16	4	4.00	4.22	2.02	.79	1.48	.7	1.46	.7	.55	-.04	.53	77 77
14	4	3.50	3.85	1.02	.63	.67	-.2	.80	.0	.98	.55	.64	78 78
14	4	3.50	3.85	1.02	.63	.55	-.5	.72	-.1	1.23	.87	.64	79 79
13	4	3.25	3.67	.65	.59	.35	-1.1	.54	-.5	1.06	.92	.68	80 80
15	4	3.75	4.03	1.46	.70	.94	.2	1.11	.4	.69	.63	.59	81 81
15	4	3.75	4.03	1.46	.70	.38	-.7	.36	-.8	1.54	.98	.59	82 82
16	4	4.00	4.22	2.02	.79	.75	.0	.99	.2	.99	.26	.53	83 83
14	4	3.50	3.85	1.02	.63	.22	-1.3	.23	-1.3	1.73	.80	.64	84 84
15	4	3.75	4.03	1.46	.70	.20	-1.2	.26	-1.1	1.76	.80	.59	85 85
15	4	3.75	4.03	1.46	.70	.20	-1.2	.26	-1.1	1.76	.80	.59	86 86
16	4	4.00	4.22	2.02	.79	1.48	.7	1.46	.7	.55	-.04	.53	87 87
16	4	4.00	4.22	2.02	.79	1.48	.7	1.46	.7	.55	-.04	.53	88 88
16	4	4.00	4.22	2.02	.79	.09	-1.6	.13	-1.5	1.91	.92	.53	89 89
10	4	2.50	3.01	-.32	.56	.43	-.7	.43	-.7	1.31	.54	.77	90 90
13	4	3.25	3.67	.65	.59	.90	.0	.72	-.2	1.57	.22	.68	91 91
16	4	4.00	4.22	2.02	.79	1.43	.7	1.51	.8	.44	.41	.53	92 92
20	4	5.00	4.93	(4.78	1.93)	Maximum					.00	.00	93 93
14	4	3.50	3.85	1.02	.63	.67	-.2	.80	.0	.98	.55	.64	94 94
16	4	4.00	4.22	2.02	.79	1.30	.6	1.10	.3	.71	.81	.53	95 95
15	4	3.75	4.03	1.46	.70	1.75	1.0	2.55	1.6	-.14	-.32	.59	96 96
10	4	2.50	3.01	-.32	.56	.06	-2.3	.06	-2.2	2.10	.97	.77	97 97
10	4	2.50	3.01	-.32	.56	.06	-2.3	.06	-2.2	2.10	.97	.77	98 98
15	4	3.75	4.03	1.46	.70	.20	-1.2	.26	-1.1	1.76	.80	.59	99 99
16	4	4.00	4.22	2.02	.79	1.30	.6	1.10	.3	.71	.81	.53	100 100
9	4	2.25	2.73	-.62	.55	2.73	1.8	3.03	2.0	-1.07	-.08	.78	101 101
14	4	3.50	3.85	1.02	.63	1.69	1.0	2.29	1.5	.22	.33	.64	102 102
54	15	3.60	3.64	.64	.34	.58	-1.0	.65	-.8	1.30	.76	.55	103 103
10	12	.83	.65	-3.04	.37	.98	.1	1.62	1.1	.69	.05	.57	104 104
4	1	4.00	3.66	.22	1.35	.00	-1.1	.00	-1.1	1.98	-1.00	.00	105 105
2	4	.50	.64	-3.05	.78	.82	.1	.62	.0	.92	-.02	.49	106 106
33	12	2.75	2.78	-.57	.33	.70	-.7	.63	-.8	1.44	.82	.69	107 107
50	13	3.85	3.88	1.07	.40	.48	-1.2	.51	-1.2	1.43	.49	.53	108 108
11	4	2.75	3.26	.00	.56	1.36	.6	1.38	.7	.58	.84	.75	109 109
4	1	4.00	3.66	.22	1.35	.00	-1.1	.00	-1.1	1.98	-1.00	.00	110 110
47	13	3.62	3.66	.63	.37	2.24	2.3	2.14	2.1	.14	.72	.58	111 111
16	4	4.00	4.22	2.02	.79	.09	-1.6	.13	-1.5	1.91	.92	.53	112 112
26	12	2.17	2.07	-1.30	.32	.59	-1.0	.59	-1.0	1.68	.90	.71	113 113
11	4	2.75	3.26	.00	.56	2.08	1.4	2.22	1.5	-1.28	.25	.75	114 114
4	1	4.00	3.66	.22	1.35	.00	-1.1	.00	-1.1	1.98	-1.00	.00	115 115
43	12	3.58	3.65	.62	.38	.97	.0	.93	.0	1.08	.57	.59	116 116
7	4	1.75	2.15	-1.22	.54	.59	-.4	.58	-.4	1.68	.98	.75	117 117
10	4	2.50	3.01	-.32	.56	.90	.1	.97	.2	.82	.92	.77	118 118
11	4	2.75	3.26	.00	.56	.25	-1.4	.22	-1.4	1.83	.78	.75	119 119
32	12	2.67	2.68	-.68	.32	.67	-.7	.69	-.7	1.40	.62	.70	120 120
10	4	2.50	3.01	-.32	.56	.06	-2.3	.06	-2.2	2.10	.97	.77	121 121
10	4	2.50	3.01	-.32	.56	.54	-.5	.54	-.5	1.11	.89	.77	122 122
3	4	.75	.95	-2.54	.66	1.11	.4	1.01	.3	.84	.53	.58	123 123
30	12	2.50	2.48	-.89	.32	.96	.0	.87	-.1	1.16	.79	.71	124 124
47	12	3.92	3.96	1.28	.44	1.03	.2	1.27	.7	.72	.29	.52	125 125
8	4	2.00	2.44	-.93	.55	.61	-.3	.65	-.3	1.74	.94	.77	126 126
9	4	2.25	2.73	-.62	.55	.33	-.9	.36	-.9	1.99	.98	.78	127 127
23	15	1.53	1.32	-2.08	.29	1.87	2.0	2.40	2.7	-.22	.02	.66	128 128
6	15	.40	.30	-3.99	.45	1.45	.9	1.34	.6	.73	.03	.40	129 129
1	1	1.00	.66	-2.92	1.15	.00	-1.5	.00	-1.5	2.07	1.00	.00	130 130
46	13	3.54	3.55	.41	.36	.81	-.3	.72	-.6	1.42	.74	.63	131 131
47	13	3.62	3.63	.54	.37	.88	-.1	.81	-.3	1.33	.61	.62	132 132
11	4	2.75	3.26	.00	.56	.25	-1.4	.22	-1.4	1.83	.78	.75	133 133
5	4	1.25	1.56	-1.82	.56	1.21	.5	.89	.0	1.32	.39	.69	134 134
2	4	.50	.64	-3.05	.78	.46	-.4	.47	-.2	1.05	.79	.49	135 135
35	16	2.19	1.97	-1.40	.28	1.25	.7	1.36	1.0	.79	.54	.71	136 136
24	12	2.00	1.87	-1.50	.32	2.22	2.3	2.26	2.3	.12	.69	.71	137 137
15	13	1.15	.84	-2.70	.32	1.21	.6	.96	.0	1.09	.78	.64	138 138
52	13	4.00	4.02	1.42	.43	.73	-.4	.97	.0	.99	.47	.49	139 139
10	4	2.50	3.01	-.32	.56	.32	-1.0	.31	-1.0	1.22	.80	.77	140 140
40	12	3.33	3.41	.22	.35	1.58	1.3	1.65	1.4	.23	.51	.63	141 141
11	4	2.75	3.26	.00	.56	.31	-1.1	.33	-1.0	1.97	.86	.75	142 142
34	12	2.83	2.88	-.47	.33	1.27	.7	1.36	.9	.15	.31	.69	143 143
9	4	2.25	2.73	-.62	.55	1.76	1.0	1.87	1.1	-.15	.46	.78	144 144
11	4	2.75	3.26	.00	.56	.25	-1.4	.22	-1.4	1.83	.78	.75	145 145
37	14	2.64	2.67	-.66	.30	1.02	.1	1.02	.1	.81	.62	.66	146 146
15	12	1.25	1.03	-2.43	.33	1.21	.6	1.17	.5	.46	.40	.65	147 147
12	4	3.00	3.47	.31	.57	1.29	.6	1.26	.5	.64	.96	.72	148 148
42	13	3.23	3.44	.17	.34	.95	.0	.84	-.3	1.13	.64	.75	149 149

Total Score	Total Count	Obsvd Average	Fair(M) Average	Measure	Model S.E.	Infit MnSq	ZStd	Outfit MnSq	ZStd	Estim. Discrm	Correlation PtMea	PtExp	Num examinees
54	13	4.15	4.43	2.45	.48	2.58	2.6	5.10	4.4	-.67	.09	.70	150 150
56	15	3.73	3.90	1.00	.37	3.09	3.4	2.99	3.3	-.37	.72	.72	151 151
20	6	3.33	3.93	1.29	.54	.44	-.9	.44	-.8	1.48	.65	.60	152 152
50	13	3.85	4.04	1.31	.42	.63	-.7	.92	.0	1.17	.65	.75	153 153
50	13	3.85	4.04	1.31	.42	.45	-1.3	.46	-1.3	1.43	.88	.75	154 154
36	10	3.60	3.85	.90	.43	.93	.0	1.01	.1	.65	.36	.74	155 155
64	14	4.57	4.76	3.60	.56	1.19	.5	1.46	.7	.66	.50	.62	156 156
29	8	3.63	4.08	1.70	.52	.74	-.3	.72	-.3	1.11	.81	.64	157 157
14	8	1.75	2.23	-1.37	.40	.91	.0	.98	.1	1.10	.54	.73	158 158
35	9	3.89	4.29	2.22	.53	1.51	1.0	1.45	.9	.54	.87	.62	159 159
27	9	3.00	3.55	.51	.40	1.78	1.5	1.41	.9	.75	.46	.58	160 160
10	6	1.67	2.61	-.93	.47	1.63	1.1	1.64	1.0	.42	.37	.58	161 161
24	13	1.85	2.10	-1.53	.31	.36	-2.0	.36	-2.0	1.58	.81	.71	162 162
5	6	.83	1.73	-2.17	.54	1.83	1.3	1.47	.8	.79	.66	.57	163 163
52	13	4.00	4.19	1.73	.45	.42	-1.4	.38	-1.5	1.51	.85	.72	164 164
65	14	4.64	4.84	4.15	.57	.33	-2.0	.28	-.9	1.64	.80	.55	165 165
39	12	3.25	3.54	.35	.36	.59	-1.0	.68	-.7	1.23	.79	.72	166 166
53	12	4.42	4.48	2.40	.55	.77	-.3	.72	-.3	1.17	.54	.60	167 167
22	12	1.83	2.09	-1.54	.33	.60	-1.0	.56	-1.1	1.47	.83	.73	168 168
14	9	1.56	1.97	-1.73	.39	.87	-.1	.80	-.2	1.37	.90	.78	169 169
41	12	3.42	3.70	.63	.38	.74	-.5	.73	-.5	1.20	.74	.72	170 170
15	8	1.88	2.36	-1.21	.40	.38	-1.4	.35	-1.5	1.79	.82	.74	171 171
32	8	4.00	4.34	2.13	.59	.56	-.6	.48	-.8	1.36	.78	.74	172 172
42	13	3.23	3.44	.17	.34	.73	-.6	.94	.0	1.14	.69	.75	173 173
51	13	3.92	4.12	1.49	.44	.23	-2.3	.23	-2.3	1.66	.90	.75	174 174
30	9	3.33	3.78	.84	.43	2.63	2.5	3.00	2.9	-.46	.16	.71	175 175
52	14	3.71	3.90	.99	.38	1.10	.3	1.09	.3	.92	.75	.73	176 176
37	8	4.63	4.86	4.28	.75	1.19	.4	.75	.1	1.07	.66	.59	177 177
42	10	4.20	4.39	2.30	.55	1.04	.2	1.23	.5	.81	.50	.65	178 178
71	15	4.73	4.88	4.50	.61	1.65	1.3	.87	.2	.86	.53	.51	179 179
10	13	.77	.89	-3.11	.36	.62	-.9	.66	-.5	1.04	.69	.57	180 180
12	9	1.33	1.88	-1.84	.38	.95	.0	.86	-.1	1.41	.91	.68	181 181
19	13	1.46	1.70	-2.02	.32	.68	-.8	.83	-.2	1.07	.57	.69	182 182
22	9	2.44	2.87	-.57	.38	.51	-1.1	.49	-1.1	1.72	.66	.72	183 183
6	7	.86	1.81	-2.10	.49	.51	-.9	.47	-.9	1.35	.88	.54	184 184
40	13	3.08	3.34	.06	.33	.87	-.2	1.00	.1	1.06	.71	.71	185 185
22.7	7.7	3.02	3.04	.08	.57	.92	-.1	.96	-.1		.51		Mean (Count: 185)
14.7	3.7	1.15	1.27	2.02	.28	.59	1.1	.71	1.1		.40		S.D. (Population)
14.7	3.7	1.15	1.27	2.02	.28	.59	1.1	.71	1.1		.40		S.D. (Sample)

Appendix E: Writing examinees measurement report (arranged by N)

Total Score	Total Count	Obsvd Average	Fair(M) Average	Measure	Model S.E.	Infit MnSq	Infit ZStd	Outfit MnSq	Outfit ZStd	Estim. Discrm	Corr. PtBis	Num examinees
23	9	2.56	2.72	-1.21	.30	1.55	1.1	1.64	1.3	.39	.07	1 1_v4
25	9	2.78	2.98	-1.03	.31	1.83	1.5	1.88	1.5	.29	.21	2 2_v4
19	10	1.90	2.00	-1.68	.26	1.97	2.2	1.71	1.6	.01	.31	3 3_v4
38	10	3.80	4.05	.12	.40	.96	.1	1.18	.4	.82	.47	4 4_v4
25	10	2.50	2.61	-1.30	.27	2.87	3.0	2.66	2.8	-.59	.25	5 5_v4
9	11	.82	.98	-2.44	.30	1.06	.2	.76	-.2	1.34	.31	6 6_v4
10	10	1.00	1.09	-2.33	.30	.91	.0	.90	.0	.42	.28	7 7_v4
3	10	.30	.35	-3.38	.57	1.40	.6	1.21	.5	.99	.15	8 8_v4
34	8	4.25	4.53	1.18	.53	1.07	.3	1.12	.3	.80	.41	9 9_v4
42	9	4.67	4.69	1.65	.67	1.48	.8	1.24	.5	.43	.01	10 10_v2
40	9	4.44	4.66	1.63	.55	2.19	1.7	1.16	.4	.82	.47	11 11_v4
42	9	4.67	4.69	1.65	.67	.30	-1.2	.29	-.3	1.44	.46	12 12_v2
40	9	4.44	4.44	.91	.56	.63	-.4	.51	-.3	1.29	.50	13 13_v2
21	9	2.33	2.49	-1.40	.28	1.12	.3	1.12	.4	.88	.32	14 14_v4
27	9	3.00	3.51	-.52	.36	1.37	.8	1.28	.6	.99	.50	15 15_v4
29	8	3.63	3.97	.03	.43	1.37	.7	1.51	.9	.43	.40	16 16_v4
31	8	3.88	4.21	.44	.47	1.05	.2	1.01	.2	.88	.53	17 17_v4
41	9	4.56	4.57	1.25	.60	.26	-1.5	.26	-.6	1.55	.47	18 18_v2
44	9	4.89	4.90	2.96	1.05	.65	.0	.90	.0	1.19	.34	19 19_v2
28	8	3.50	3.85	-.14	.42	1.88	1.4	2.00	1.5	.11	.37	20 20_v4
40	9	4.44	4.44	.91	.56	1.09	.3	.73	.0	.91	.32	21 21_v2
36	9	4.00	3.90	-.11	.46	1.31	.6	1.57	.9	.50	.36	22 22_v2
27	8	3.38	3.72	-.31	.40	.28	-1.6	.30	-1.4	1.64	.54	23 23_v4
33	7	4.71	4.82	2.27	.81	.72	-.1	.35	-.6	1.41	.48	24 24_v4
30	8	3.75	4.09	.23	.45	2.00	1.5	2.00	1.5	-.06	.31	25 25_v4
15	9	1.67	1.82	-1.82	.27	.41	-1.9	.44	-1.5	1.67	.38	26 26_v4
24	9	2.67	2.85	-1.12	.30	.71	-.5	.80	-.2	1.09	.28	27 27_v4
16	9	1.78	2.11	-1.63	.29	1.94	1.9	1.54	1.2	-.18	.24	28 28_v4
29	9	3.22	3.54	-.53	.36	.69	-.4	.75	-.3	1.02	.44	29 29_v4
12	8	1.50	1.63	-1.93	.29	.93	.0	.91	.0	1.01	.18	30 30_v4
11	9	1.22	1.50	-2.04	.30	.88	-.1	.83	-.1	.82	.27	31 31_v4
27	9	3.00	3.23	-.82	.33	4.13	3.6	4.00	3.5	-1.91	-.16	32 32_v4
42	9	4.67	4.69	1.65	.67	1.29	.6	.89	.3	.87	.31	33 33_v2
34	9	3.78	3.61	-.48	.41	.36	-1.2	.68	-.3	1.32	.52	34 34_v2
41	9	4.56	4.57	1.25	.60	1.03	.2	.80	.1	.81	.23	35 35_v2
39	9	4.33	4.31	.61	.53	.25	-1.5	.23	-1.1	1.68	.54	36 36_v2
39	9	4.33	4.31	.61	.53	.79	-.1	.69	-.1	1.16	.42	37 37_v2
34	9	3.78	3.61	-.48	.41	.65	-.4	.61	-.5	1.39	.49	38 38_v2
35	9	3.89	3.75	-.30	.43	.74	-.2	.56	-.6	1.18	.46	39 39_v2
33	9	3.67	3.46	-.64	.39	.83	-.1	2.45	1.9	.55	.36	40 40_v2
28	9	3.11	2.67	-1.28	.33	1.51	1.1	1.31	.7	.53	.28	41 41_v2
39	9	4.33	4.31	.61	.53	1.02	.2	.71	-.1	1.11	.48	42 42_v2
39	9	4.33	4.31	.61	.53	1.04	.2	.92	.1	.97	.39	43 43_v2
35	9	3.89	3.75	-.30	.43	.73	-.2	.69	-.3	1.29	.46	44 44_v2
40	9	4.44	4.44	.91	.56	.67	-.4	.58	-.2	1.12	.44	45 45_v2
25	9	2.78	2.16	-1.60	.32	.56	-1.1	.65	-.7	1.67	.56	46 46_v2
34	9	3.78	3.61	-.48	.41	.41	-1.0	.33	-1.2	1.65	.56	47 47_v2
39	10	3.90	3.77	-.29	.40	1.79	1.2	1.75	1.2	.07	.20	48 48_v2
34	9	3.78	3.61	-.48	.41	.65	-.4	.61	-.5	1.39	.49	49 49_v2
24	9	2.67	1.99	-1.70	.32	1.98	2.0	1.53	1.2	.22	.47	50 50_v2
19	4	4.75	4.93	3.33	1.15	2.20	1.1	9.00	2.4	-1.48	-.35	51 51_v1
16	4	4.00	4.46	.98	.74	9.00	4.1	7.95	3.4	-3.92	-.02	52 52_v1
19	4	4.75	4.93	3.33	1.15	.06	-1.1	.06	.1	1.51	.67	53 53_v1
18	4	4.50	4.82	2.31	.91	.67	.0	.59	.2	1.05	.57	54 54_v1
18	4	4.50	4.82	2.31	.91	.24	-.7	.18	-.2	1.58	.67	55 55_v1
19	4	4.75	4.93	3.33	1.15	.06	-1.1	.06	.1	1.51	.67	56 56_v1
15	4	3.75	4.22	.47	.69	.26	-1.0	.26	-.9	1.76	.70	57 57_v1
18	4	4.50	4.82	2.31	.91	.24	-.7	.18	-.2	1.58	.67	58 58_v1
14	4	3.50	3.96	.03	.65	2.62	1.6	2.75	1.7	-.83	.31	59 59_v1
16	4	4.00	4.46	.98	.74	1.44	.7	2.46	1.4	-.30	.42	60 60_v1
14	4	3.50	3.96	.03	.65	.76	.0	.81	.0	.88	.63	61 61_v1
19	4	4.75	4.93	3.33	1.15	2.20	1.1	9.00	2.4	-1.48	-.35	62 62_v1
12	4	3.00	3.33	-.74	.58	.51	-.4	.42	-.6	1.82	.67	63 63_v1
16	4	4.00	4.46	.98	.74	.08	-1.5	.14	-1.2	1.80	.70	64 64_v1
17	4	4.25	4.66	1.57	.81	1.71	.9	2.78	1.4	-.10	.30	65 65_v1
16	4	4.00	4.46	.98	.74	.70	.0	1.23	.5	.76	.60	66 66_v1
16	4	4.00	4.46	.98	.74	.82	.0	1.38	.6	.74	.60	67 67_v1
17	4	4.25	4.66	1.57	.81	.19	-.9	.22	-.6	1.55	.69	68 68_v1

Total Score	Total Count	Obsvd Average	Fair(M) Average	Model Measure	S.E.	Infit MnSq	ZStd	Outfit MnSq	ZStd	Estim. Discrm	Corr. PtBis	Num examinees
18	4	4.50	4.82	2.31	.91	.67	.0	.59	.2	1.05	.57	69 69_v1
16	4	4.00	4.46	.98	.74	.08	-1.5	.14	-1.2	1.80	.70	70 70_v1
19	4	4.75	4.93	3.33	1.15	.06	-1.1	.06	.1	1.51	.67	71 71_v1
16	4	4.00	4.46	.98	.74	.82	.0	1.38	.6	.74	.60	72 72_v1
18	4	4.50	4.82	2.31	.91	1.13	.4	5.03	1.8	-.25	.27	73 73_v1
17	4	4.25	4.66	1.57	.81	.78	.0	2.46	1.2	.38	.51	74 74_v1
15	4	3.75	4.22	.47	.69	1.37	.6	1.45	.7	.27	.67	75 75_v1
16	4	4.00	4.46	.98	.74	.08	-1.5	.14	-1.2	1.80	.70	76 76_v1
16	4	4.00	4.46	.98	.74	.70	.0	1.23	.5	.76	.60	77 77_v1
15	4	3.75	4.22	.47	.69	.37	-.7	.72	.0	1.28	.65	78 78_v1
13	4	3.25	3.67	-.38	.62	.97	.2	1.20	.5	.71	.60	79 79_v1
17	4	4.25	4.66	1.57	.81	.78	.0	2.46	1.2	.38	.51	80 80_v1
13	4	3.25	3.67	-.38	.62	.56	-.3	.56	-.4	1.79	.68	81 81_v1
16	4	4.00	4.46	.98	.74	.82	.0	1.38	.6	.74	.60	82 82_v1
17	4	4.25	4.66	1.57	.81	.58	-.1	.42	-.2	1.46	.67	83 83_v1
13	4	3.25	3.67	-.38	.62	1.47	.7	1.62	.9	.20	.54	84 84_v1
16	4	4.00	4.46	.98	.74	.82	.0	1.38	.6	.74	.60	85 85_v1
12	4	3.00	3.33	-.74	.58	1.17	.4	1.44	.7	.21	.62	86 86_v1
18	4	4.50	4.82	2.31	.91	.24	-.7	.18	-.2	1.58	.67	87 87_v1
17	4	4.25	4.66	1.57	.81	.19	-.9	.22	-.6	1.55	.69	88 88_v1
16	4	4.00	4.46	.98	.74	.82	.0	1.38	.6	.74	.60	89 89_v1
12	4	3.00	3.33	-.74	.58	.90	.1	1.26	.5	.31	.59	90 90_v1
13	4	3.25	3.67	-.38	.62	1.47	.7	1.62	.9	.20	.54	91 91_v1
15	4	3.75	4.22	.47	.69	1.82	1.0	1.27	.5	.91	.67	92 92_v1
17	4	4.25	4.66	1.57	.81	.19	-.9	.22	-.6	1.55	.69	93 93_v1
13	4	3.25	3.67	-.38	.62	.22	-1.2	.28	-1.0	1.36	.69	94 94_v1
15	4	3.75	4.22	.47	.69	.37	-.7	.72	.0	1.28	.65	95 95_v1
17	4	4.25	4.66	1.57	.81	.58	-.1	.42	-.2	1.46	.67	96 96_v1
15	4	3.75	4.22	.47	.69	.37	-.7	.72	.0	1.28	.65	97 97_v1
14	4	3.50	3.96	.03	.65	1.91	1.1	1.54	.8	-.18	.57	98 98_v1
12	4	3.00	3.33	-.74	.58	.55	-.4	.52	-.4	1.06	.64	99 99_v1
15	4	3.75	4.22	.47	.69	1.66	.9	1.57	.8	.11	.50	100 100_v1
32	13	2.46	1.99	-1.68	.28	1.45	1.0	1.18	.5	1.11	.57	101 101_v1
14	4	3.50	3.96	.03	.65	.37	-.7	.44	-.6	1.39	.69	102 102_v1
13	4	3.25	3.67	-.38	.62	.57	-.3	.64	-.2	1.63	.70	103 103_v1
32	12	2.67	2.52	-1.36	.31	.79	-.3	.75	-.3	1.42	.63	104 104_v1
13	4	3.25	3.67	-.38	.62	.30	-.9	.32	-.9	1.41	.67	105 105_v1
38	14	2.71	2.48	-1.38	.28	.31	-2.2	.36	-1.8	1.60	.65	106 106_v1
12	4	3.00	3.33	-.74	.58	.10	-1.6	.14	-1.5	1.40	.70	107 107_v1
12	4	3.00	3.33	-.74	.58	.10	-1.6	.14	-1.5	1.40	.70	108 108_v1
10	4	2.50	2.54	-1.34	.52	.50	-.5	.60	-.2	1.13	.57	109 109_v1
40	12	3.33	3.61	-.45	.36	.84	-.2	.79	-.3	1.38	.67	110 110_v1
45	13	3.46	3.67	-.38	.36	.41	-1.5	.45	-1.4	1.31	.66	111 111_v1
46	14	3.29	3.65	-.38	.34	.62	-.8	.67	-.7	1.13	.64	112 112_v1
42	12	3.50	3.82	-.18	.38	.81	-.2	.82	-.2	.92	.63	113 113_v1
44	13	3.38	3.56	-.50	.35	.63	-.8	.66	-.7	1.66	.68	114 114_v1
9	4	2.25	2.13	-1.61	.50	1.96	1.2	1.88	1.0	.09	.36	115 115_v1
11	4	2.75	2.95	-1.06	.55	.43	-.6	.50	-.4	.93	.67	116 116_v1
12	4	3.00	3.33	-.74	.58	.28	-1.0	.39	-.7	1.77	.70	117 117_v1
10	4	2.50	2.54	-1.34	.52	.50	-.5	.60	-.2	1.13	.57	118 118_v1
16	4	4.00	4.46	.98	.74	1.25	.5	1.13	.4	.70	.57	119 119_v1
16	4	4.00	4.46	.98	.74	1.25	.5	1.13	.4	.70	.57	120 120_v1
42	14	3.00	3.23	-.83	.32	.69	-.6	.73	-.5	1.42	.65	121 121_v1
39	12	3.25	3.49	-.58	.36	.55	-.9	.58	-.9	1.75	.68	122 122_v1
11	4	2.75	2.95	-1.06	.55	.36	-.8	.46	-.5	1.64	.68	123 123_v1
12	4	3.00	3.33	-.74	.58	.51	-.4	.42	-.6	1.82	.67	124 124_v1
11	4	2.75	2.95	-1.06	.55	.43	-.6	.50	-.4	.93	.67	125 125_v1
51	13	3.92	4.23	.46	.40	.50	-1.1	.35	-1.6	1.74	.67	126 126_v1
11	4	2.75	2.95	-1.06	.55	.50	-.5	.51	-.4	1.52	.66	127 127_v1
50	14	3.57	3.73	-.32	.35	.52	-1.2	.54	-1.1	1.64	.69	128 128_v1
34	15	2.27	1.99	-1.70	.26	1.11	.4	.94	.0	1.11	.57	129 129_v1
35	13	2.69	2.61	-1.31	.29	1.54	1.2	3.52	3.5	-.04	.45	130 130_v1
20	13	1.54	1.07	-2.38	.27	.88	-.1	.63	-.5	1.36	.49	131 131_v1
47	12	3.92	4.29	.60	.42	.67	-.5	.82	-.1	1.11	.62	132 132_v1
47	13	3.62	4.12	.32	.37	.49	-1.2	.58	-.8	1.31	.64	133 133_v1
42	12	3.50	3.82	-.18	.38	.80	-.3	.78	-.3	1.08	.61	134 134_v1
14	4	3.50	3.96	.03	.65	.31	-.9	.49	-.5	1.44	.67	135 135_v1
13	4	3.25	3.67	-.38	.62	.30	-.9	.32	-.9	1.41	.67	136 136_v1
34	12	2.83	2.82	-1.16	.32	2.12	2.0	1.84	1.5	-.33	.52	137 137_v1
12	4	3.00	3.33	-.74	.58	1.17	.4	1.44	.7	.21	.62	138 138_v1
10	4	2.50	2.54	-1.34	.52	.36	-.8	.30	-.8	1.64	.68	139 139_v1
12	3	4.00	3.68	-.47	.71	.41	-.4	.38	-.5	1.57	.00	140 140_v1
44	13	3.38	3.66	-.39	.35	.62	-.8	.78	-.3	1.10	.63	141 141_v1
38	12	3.17	3.37	-.70	.35	.77	-.3	.66	-.7	1.20	.63	142 142_v1
50	14	3.57	3.73	-.32	.35	.68	-.6	.63	-.8	1.70	.70	143 143_v1
49	14	3.50	3.72	-.34	.34	.68	-.6	.66	-.7	1.70	.68	144 144_v1
50	13	3.85	4.15	.32	.39	.52	-1.1	.58	-.8	1.31	.66	145 145_v1
11	4	2.75	2.95	-1.06	.55	.36	-.8	.46	-.5	1.64	.68	146 146_v1
47	13	3.62	3.88	-.12	.37	1.38	.9	1.15	.4	.95	.59	147 147_v1
12	4	3.00	3.33	-.74	.58	.84	.0	.86	.0	1.32	.67	148 148_v1

Total Score	Total Count	Obsvd Average	Fair(M) Average	Measure	Model S.E.	Infit MnSq	ZStd	Outfit MnSq	ZStd	Estim. Discrm	Corr. PtBis	Num examinees
14	4	3.50	3.96	.03	.65	.77	.0	.65	-.2	1.82	.70	149 149_v1
8	4	2.00	1.74	-1.86	.49	.09	-1.9	.12	-1.3	1.91	.64	150 150_v1
37	13	2.85	2.45	-1.42	.28	.68	-.7	.77	-.4	1.47	.65	151 151_v3
54	13	4.15	4.25	.50	.41	.50	-1.0	.47	-1.2	1.61	.66	152 152_v3
66	15	4.40	4.56	1.27	.43	1.92	1.6	1.70	1.2	.21	.26	153 153_v3
47	14	3.36	3.42	-.64	.31	.43	-1.5	.51	-1.2	1.42	.65	154 154_v3
50	14	3.57	3.51	-.58	.32	.87	-.1	.95	.0	.90	.49	155 155_v3
39	13	3.00	2.69	-1.26	.29	2.35	2.5	2.01	2.0	.20	.20	156 156_v3
57	15	3.80	3.93	-.01	.34	1.01	.1	.92	.0	1.06	.53	157 157_v3
28	13	2.15	1.43	-2.06	.26	1.80	1.7	1.87	1.7	.48	.38	158 158_v3
57	15	3.80	3.93	-.01	.34	1.43	1.0	1.51	1.1	.41	.46	159 159_v3
44	13	3.38	3.28	-.80	.32	.29	-2.0	.32	-1.9	1.62	.66	160 160_v3
40	13	3.08	2.81	-1.17	.29	.66	-.7	.75	-.4	.81	.57	161 161_v3
18	11	1.64	.87	-2.51	.29	.38	-1.5	.48	-1.0	.81	.64	162 162_v3
71	15	4.73	4.83	2.43	.56	.50	-.8	.63	-.1	1.16	.45	163 163_v3
51	13	3.92	3.99	.04	.38	.95	.0	1.14	.4	.87	.54	164 164_v3
57	13	4.38	4.50	1.06	.46	1.10	.3	.94	.0	.85	.42	165 165_v3
56	13	4.31	4.42	.86	.44	.47	-1.1	.43	-1.2	1.54	.63	166 166_v3
18	14	1.29	.65	-2.81	.25	.42	-1.8	.46	-1.2	1.27	.53	167 167_v3
65	15	4.33	4.50	1.09	.41	1.55	1.1	1.54	1.1	.63	.38	168 168_v3
32	11	2.91	2.81	-1.17	.32	.97	.0	.83	-.2	1.14	.57	169 169_v3
49	13	3.77	3.80	-.23	.36	.57	-.9	.56	-1.0	1.50	.67	170 170_v3
66	15	4.40	4.56	1.27	.43	.84	-.1	.68	-.5	1.21	.54	171 171_v3
64	15	4.27	4.43	.93	.40	.63	-.7	.69	-.5	1.15	.53	172 172_v3
65	15	4.33	4.50	1.09	.41	.65	-.6	.47	-1.1	1.53	.65	173 173_v3
41	14	2.93	2.54	-1.36	.27	1.46	1.1	1.25	.7	.47	.50	174 174_v3
19	10	1.90	1.38	-2.11	.31	.75	-.4	.71	-.4	1.02	.60	175 175_v3
46	13	3.54	3.50	-.59	.33	.56	-1.0	.55	-1.0	1.35	.64	176 176_v3
39	11	3.55	3.68	-.35	.37	.98	.1	.89	.0	1.16	.58	177 177_v3
48	14	3.43	3.31	-.78	.31	.32	-2.0	.34	-1.9	1.82	.68	178 178_v3
27.8	8.1	3.48	3.64	.00	.53	.93	-.1	1.07	.0		.52	Mean (Count: 178)
15.3	4.0	.86	.99	1.31	.21	.87	1.1	1.23	1.0		.19	S.D. (Population)
15.4	4.0	.87	.99	1.32	.21	.87	1.1	1.23	1.0		.19	S.D. (Sample)

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