OHIO ACHIEVEMENT ASSESSMENT
GRADE 3 READING TEST STATISTICAL SUMMARY
October 2014 Test Administration

These statistics describe the entire population of Ohio grade 3 public school students (including community schools) tested during the October 2014 administration.

Table 1 – Summary of Parameters from the October 2014 Administration of the Ohio Achievement Assessment for Grade 3 Reading.

N-count	128,238
Max Raw Score	49
Raw Score Mean	32.71
Raw Score Standard Deviation	9.93
Raw Score SEM	3.04
Max Scaled Score	505
Scaled Score Mean	404.97
Scaled Score Standard Deviation	30.53
Scaled Score SEM	9.35
Reliability	0.91

Table 2 – Cut Score Points for Basic, Proficient, Accelerated, and Advanced Standards and Percentage of Students by Performance Levels

Standard	Raw Score	Scaled Score	Percent
Limited	Below 26	Below 385	24.2
Basic	26	385	19.0
Proficient	33	400	18.0
Accelerated	38	415	16.6
Advanced	42	432	22.1

Table 3 – Subscale (Raw Score) Bands for the Minimally Proficient Student in Grade 3, October 2014 Administration.

	Content Standard	Below	At or Near Proficient	Above	Possible Score
Grade 3 Reading	Vocabulary	0 – 6	7 – 8	9	9
	Reading process	0 – 9	10 – 13	14 – 16	16
	Informational text	0 – 6	7 – 9	10 – 12	12
	Literary text	0 – 7	8 – 10	11 – 12	12

Equating and Scaling: How Raw Scores Are Converted Into Scaled Scores

TEST FORM CONSTRUCTION

All items in the October 2014 Ohio Grade 3 Reading Achievement Test were previously field-tested, and item difficulty estimates from the field test administrations were used to pre-equate operational test forms during form construction. Pre-equating based on field-test item parameters aids in the development of nearly equivalent Ohio Achievement Assessment (OAA) forms across test administrations.

COMMON ITEM EQUATING

Following administration of the October 2014 Grade 3 Reading Achievement Test, item difficulty values were re-estimated using an early return sample. The early return sample was selected to be statistically representative of all Ohio grade 3 public school students. Because bank item difficulty estimates for all test items were available from the previous field test administrations, all the operational items could potentially serve as anchor items in the equating process.

After calibrating items based on the early return sample data, all available linking items were used to calculate the linking constant needed to bring the set of operational items back to the appropriate OAA "bank," or reference, scale values. First, the October 2014 difficulty values (from the early return sample) were computed and compared with the bank difficulty values. The mean difference between the current and the bank difficulties of the anchor items is called the equating constant. The equating constant was added to each difficulty value for the current test administration item parameters so that the mean item difficulties were equal, yielding linked parameter estimates for each item. When the equating process is complete, item difficulties from the current administration are directly comparable with those from the bank. This calibrates the test to the same scale as used in prior testing for the same content area and grade level.

SCALING

Because the meaning of raw scores changes across test forms and test administrations, scaled scores are usually used in place of raw scores.

As previously noted, after administering the October 2014 operational test, test items were calibrated and equated on the basis of the early return sample, and Rasch ability estimates were computed for each possible raw score. The Rasch ability estimates were then transformed to the Ohio Grade 3 Reading Achievement Test scale, which is scaled so that the proficient standard is equal to 400.

OHIO ROUNDING RULE

When transforming raw scores to scaled scores, if the scaled score nearest to a performance standard cut score is below the cut score, then the scaled score is rounded up to equal the cut score. Otherwise, no special

rounding is done. For example, if a raw score is associated with an observed scaled score of 398.94 and 398.94 is the closest observed scaled score to the proficient level cut score, then this value is rounded up to 400, corresponding to the proficient level performance standard. Conversely, if the closest scaled score value to the proficient level cut score is 401.12, no special rounding rules are invoked because the value is greater than the cut score.

Table 4 – Raw Score to Scaled Score Conversion Table
(Cut scores indicated in **bold.**)

Raw Score	Scaled Score	Raw Score	Scaled Score
0	260	25	382
1	278	**26**	**385**
2	296	27	386
3	308	28	388
4	316	29	391
5	322	30	393
6	327	31	396
7	332	32	398
8	336	**33**	**401**
9	340	34	404
10	344	35	406
11	347	36	409
12	350	37	412
13	353	**38**	**415**
14	355	39	419
15	358	40	423
16	361	41	426
17	363	**42**	**432**
18	365	43	436
19	368	44	441
20	370	45	448
21	372	46	456
22	375	47	468
23	377	48	486
24	379	49	505

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