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Arkansas Comprehensive Testing, Assessment, and Accountability Program

Spring End-of-Course Examinations for Algebra I, Geometry, and Biology
Raw To Scale Score Conversion Tables
Spring 2012 Administration

QAI07226

Introduction

The *Raw to Scale Score Conversion Tables* provide information on raw scores attained by students for the Algebra I, Geometry, and Biology End-of-Course Examinations, and how those scores correspond with student scale scores.

The attached *Raw to Scale Score Conversion Tables* are specific to the Spring 2012 administration of the End-of-Course Examinations and do NOT apply to any other administration.

What are Scale Scores?

Scale Scores are transformed raw scores. For every possible raw score on a test form, there is a corresponding scale score, although a scale score may represent more than one raw score depending on the distribution of the results. When multiple forms of a test are used, or when results are compared from year to year, scale scores are needed to adjust for possible differences in test form length or difficulty. For example, it would not be possible to interpret a raw score of 50 items correct or points earned without knowing how many items are on the test and how difficult those items are.

Why Use Scale Scores?

Scale scores provide a useful measurement tool for many assessment programs. They are used in numerous national testing programs, including the ACT and SAT examinations, which are typically part of the admissions process for colleges and universities. Scale scores are also routinely used in many other statewide testing programs, providing the basis for long-term, meaningful comparisons of student results across different test administrations.

Educators have always adjusted for differences in test length by changing from "number correct" scores to "percent correct" scores. The next step is to remove differences in item difficulty by moving to "scale scores." To illustrate the value of this step, consider an examination with just two forms: Form A and Form B. If the items on Form A happen to be slightly more difficult than the items on Form B, one would expect a student to answer a higher percentage of items correctly if Form B were administered rather than Form A. However, a student should receive the same scale score for either form.

Scale scores are intended to make scores more meaningful by defining a scale of measurement that is not tied to a particular form of a test. However, to be meaningful, the scale must be tied to a benchmark that is meaningful to the user. The End-of-Course Examinations were constructed so that a specific score for Algebra I, a specific score for Geometry, and a specific score for Biology correspond to the Advanced, Proficient, Basic, and Below Basic performance levels. In the future, these values may correspond to different raw scores, but they will have the same meaning in terms of student performance.

April 2012 Scale Scores

The attached Raw to Scale Score Conversion Tables list the total number of raw score points available for Algebra I, Geometry, and Biology End-of-Course Examinations as well as the associated scale scores for the three content areas. While the scale scores for the three content areas are listed in conjunction with similar raw score scales, it is important to understand that the scale scores for the three content areas are not connected and should not be considered equivalent in any sense. These scores differ due to the uniqueness of the content areas and the student results relative to Algebra I, Geometry, and Biology. The overall distribution of student performance results for each content area differs from the others. This difference in the distribution of results, relative to the unique content areas, accounts for the differences in the scale scores. Given the differences between the three content areas and the differences in student performance results, it is not appropriate to compare the three sets of scale scores.

The tables below list the performance levels and associated scale scores ranges for the End-of-Course Examinations. **Again, the scale score information listed in these tables is specific to the April/May 2012 administration of the End-of-Course Examinations and <u>does NOT apply</u> to any other administration.**

2012 *Algebra I End-of-Course Examination* Scale Score Ranges

Performance Levels	EOC Algebra I Scale Scores
Below Basic	150 & below
Basic	151–199
Proficient	200–249
Advanced	250 & above

2012 *Geometry End-of-Course Examination* Scale Score Ranges

Performance Levels	EOC Geometry Scale Scores
Below Basic	153 & below
Basic	154–199
Proficient	200–249
Advanced	250 & above

2012 *Biology End-of-Course Examination* Scale Score Ranges

Performance Levels	EOC Biology Scale Scores
Below Basic	145 & below
Basic	146–199
Proficient	200–249
Advanced	250 & above

The Report Interpretation Guide for the *Algebra I, Geometry, and Biology End-of-Course Examinations* contains more information on the development of the performance levels. For additional information about the results and information on student performance, please contact:

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Arkansas Department of Education
Four Capitol Mall
Little Rock, AR 72201-1071
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2012 Algebra I End-of-Course Examination
Raw to Scale Score Conversion Tables

BELOW BASIC	
Raw Score	**Scale Score**
0	3
1	14
2	21
3	25
4	34
5	47
6	58
7	67
8	76
9	83
10	90
11	96
12	102
13	107
14	112
15	117
16	122
17	126
18	130
19	134
20	138
21	142
22	146

BASIC	
Raw Score	**Scale Score**
23	151
24	153
25	156
26	159
27	163
28	166
29	169
30	172
31	174
32	177
33	180
34	183
35	185
36	188
37	190
38	193
39	195
40	198

PROFICIENT	
Raw Score	**Scale Score**
41	200
42	203
43	205
44	208
45	210
46	212
47	214
48	216
49	218
50	220
51	222
52	224
53	226
54	228
55	230
56	232
57	234
58	236
59	239
60	241
61	243
62	245
63	247

ADVANCED	
Raw Score	**Scale Score**
64	250
65	251
66	253
67	255
68	257
69	259
70	261
71	263
72	265
73	267
74	269
75	271
76	273
77	276
78	278
79	280
80	283
81	286
82	288
83	291
84	294
85	297
86	301
87	304
88	308
89	313
90	317
91	322
92	328
93	334
94	341
95	349
96	359
97	371
98	389
99	416
100	463

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2012 Geometry End-of-Course Examination
Raw to Scale Score Conversion Tables

BELOW BASIC	
Raw Score	**Scale Score**
0	1
1	11
2	17
3	35
4	48
5	59
6	68
7	76
8	83
9	90
10	95
11	100
12	105
13	110
14	114
15	118
16	122
17	126
18	129
19	133
20	136
21	139
22	143
23	146
24	149
25	152

BASIC	
Raw Score	**Scale Score**
26	154
27	157
28	159
29	162
30	164
31	167
32	169
33	172
34	174
35	176
36	179
37	181
38	183
39	185
40	188
41	190
42	192
43	194
44	196

PROFICIENT	
Raw Score	**Scale Score**
45	200
46	201
47	203
48	205
49	207
50	209
51	211
52	213
53	215
54	216
55	218
56	220
57	222
58	224
59	226
60	228
61	230
62	232
63	234
64	235
65	237
66	239
67	241
68	243
69	245
70	247

ADVANCED	
Raw Score	**Scale Score**
71	250
72	250
73	252
74	254
75	256
76	258
77	260
78	263
79	265
80	268
81	270
82	273
83	276
84	279
85	282
86	285
87	288
88	292
89	296
90	300
91	305
92	310
93	316
94	323
95	331
96	341
97	353
98	369
99	396
100	440

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2012 Biology End-of-Course Examination
Raw to Scale Score Conversion Tables

BELOW BASIC	
Raw Score	**Scale Score**
0	0
1	4
2	9
3	14
4	19
5	31
6	41
7	50
8	58
9	64
10	71
11	76
12	82
13	87
14	91
15	96
16	100
17	104
18	107
19	111
20	115
21	118
22	121
23	124
24	128
25	131
26	134
27	136
28	139
29	142
30	145

BASIC	
Raw Score	**Scale Score**
31	147
32	150
33	153
34	155
35	158
36	160
37	163
38	165
39	168
40	170
41	172
42	175
43	177
44	179
45	182
46	184
47	187
48	189
49	191
50	194
51	196
52	198

PROFICIENT	
Raw Score	**Scale Score**
53	200
54	203
55	205
56	208
57	210
58	213
59	215
60	217
61	220
62	222
63	225
64	227
65	230
66	233
67	235
68	238
69	241
70	244
71	247

ADVANCED	
Raw Score	**Scale Score**
72	250
73	252
74	256
75	259
76	262
77	265
78	269
79	273
80	277
81	281
82	285
83	289
84	294
85	299
86	304
87	310
88	316
89	323
90	330
91	338
92	347
93	358
94	370
95	384
96	401
97	423
98	452
99	496
100	563