



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 2014 Administration

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 2014 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.

Spring 2014 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 Spring 2014 administration of the End-of-Course Examinations and does NOT apply to any other administration.**

2014 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

2014 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

2014 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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Four Capitol Mall
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2014 Algebra I End-of-Course Examination Raw to Scale Score Conversion Tables

BELOW BASIC	
Raw Score	Scale Score
0	1
1	12
2	19
3	23
4	25
5	36
6	47
7	56
8	64
9	72
10	79
11	85
12	91
13	96
14	102
15	107
16	111
17	116
18	120
19	124
20	128
21	132
22	136
23	140
24	143
25	147

BASIC	
Raw Score	Scale Score
26	151
27	154
28	157
29	161
30	164
31	167
32	169
33	172
34	175
35	178
36	180
37	183
38	186
39	188
40	191
41	194
42	196
43	199

PROFICIENT	
Raw Score	Scale Score
44	200
45	204
46	206
47	208
48	210
49	213
50	215
51	217
52	219
53	221
54	223
55	226
56	228
57	230
58	232
59	234
60	236
61	239
62	241
63	243
64	245
65	248

ADVANCED	
Raw Score	Scale Score
66	250
67	252
68	254
69	257
70	259
71	261
72	263
73	265
74	268
75	270
76	273
77	275
78	278
79	281
80	283
81	286
82	289
83	293
84	296
85	299
86	303
87	307
88	311
89	315
90	319
91	324
92	329
93	335
94	342
95	350
96	359
97	371
98	388
99	417
100	464

2014 Geometry End-of-Course Examination Raw to Scale Score Conversion Tables

BELOW BASIC	
Raw Score	Scale Score
0	1
1	11
2	17
3	32
4	46
5	57
6	67
7	75
8	82
9	88
10	94
11	99
12	104
13	109
14	113
15	117
16	121
17	125
18	129
19	132
20	136
21	139
22	142
23	146
24	149
25	152

BASIC	
Raw Score	Scale Score
26	154
27	157
28	159
29	162
30	165
31	167
32	170
33	172
34	174
35	177
36	179
37	181
38	184
39	186
40	188
41	191
42	193
43	195
44	197

PROFICIENT	
Raw Score	Scale Score
45	200
46	202
47	204
48	206
49	208
50	210
51	212
52	214
53	215
54	217
55	219
56	221
57	223
58	225
59	227
60	229
61	231
62	232
63	234
64	236
65	238
66	240
67	242
68	244
69	246
70	248

ADVANCED	
Raw Score	Scale Score
71	250
72	250
73	251
74	253
75	255
76	257
77	259
78	261
79	263
80	265
81	268
82	270
83	272
84	275
85	277
86	280
87	283
88	286
89	289
90	293
91	297
92	301
93	306
94	311
95	317
96	324
97	333
98	346
99	368
100	408

2014 Biology End-of-Course Examination Raw to Scale Score Conversion Tables

BELOW BASIC	
Raw Score	Scale Score
0	0
1	3
2	5
3	7
4	11
5	23
6	33
7	42
8	49
9	56
10	62
11	68
12	73
13	78
14	83
15	87
16	91
17	95
18	99
19	102
20	106
21	109
22	113
23	116
24	119
25	122
26	125
27	127
28	130
29	133
30	136
31	138
32	141
33	144

BASIC	
Raw Score	Scale Score
34	146
35	149
36	151
37	154
38	156
39	158
40	161
41	163
42	166
43	168
44	171
45	173
46	175
47	178
48	180
49	183
50	185
51	187
52	190
53	192
54	195
55	197

PROFICIENT	
Raw Score	Scale Score
56	200
57	202
58	205
59	207
60	210
61	212
62	215
63	218
64	220
65	223
66	226
67	229
68	231
69	234
70	237
71	240
72	243
73	246

ADVANCED	
Raw Score	Scale Score
74	250
75	253
76	256
77	260
78	263
79	267
80	270
81	274
82	278
83	282
84	287
85	291
86	296
87	301
88	307
89	313
90	319
91	326
92	333
93	341
94	351
95	362
96	375
97	391
98	414
99	451
100	513