



Arkansas Comprehensive Testing, Assessment, and Accountability Program

Mid-Year End-of-Course Examinations for Algebra I, Geometry, and Biology

Raw To Scale Score Conversion Tables

January 2012 Administration



QAI10437

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 January 2012 administration of the Mid-Year 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 Mid-Year 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.

January 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 Mid-Year End-of-Course Examinations. **Again, the scale score information listed in these tables is specific to the January 2012 administration of the End-of-Course Examinations and does NOT apply to any other administration.**

2012 Algebra I Mid-Year 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 Mid-Year 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 Mid-Year 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:

The Office of Student Assessment
Arkansas Department of Education
Four Capitol Mall, Room 106A
Little Rock, AR 72201-1071
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2012 Algebra I Mid-Year 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	36
5	49
6	60
7	69
8	78
9	85
10	92
11	98
12	104
13	110
14	115
15	119
16	124
17	128
18	133
19	137
20	140
21	144
22	148

BASIC	
Raw Score	Scale Score
23	152
24	155
25	158
26	159
27	164
28	167
29	170
30	173
31	175
32	178
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	207
45	209
46	211
47	213
48	215
49	217
50	219
51	221
52	223
53	225
54	227
55	229
56	231
57	233
58	235
59	237
60	239
61	242
62	244
63	246
64	248

ADVANCED	
Raw Score	Scale Score
65	250
66	252
67	254
68	256
69	258
70	260
71	263
72	265
73	267
74	269
75	271
76	274
77	276
78	279
79	281
80	284
81	287
82	290
83	293
84	296
85	300
86	303
87	307
88	312
89	316
90	321
91	327
92	333
93	340
94	348
95	357
96	368
97	382
98	400
99	429
100	477

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

BELOW BASIC	
Raw Score	Scale Score
0	0
1	5
2	9
3	13
4	18
5	22
6	33
7	41
8	49
9	56
10	62
11	68
12	73
13	78
14	83
15	87
16	91
17	95
18	99
19	103
20	106
21	110
22	113
23	116
24	119
25	122
26	125
27	128
28	131
29	134
30	136
31	139
32	142
33	144

BASIC	
Raw Score	Scale Score
34	147
35	149
36	152
37	154
38	157
39	159
40	161
41	164
42	166
43	169
44	171
45	173
46	176
47	178
48	180
49	183
50	185
51	187
52	190
53	192
54	194
55	197

PROFICIENT	
Raw Score	Scale Score
56	200
57	201
58	204
59	206
60	208
61	211
62	213
63	216
64	218
65	220
66	223
67	225
68	228
69	230
70	232
71	235
72	238
73	240
74	243
75	245
76	248

ADVANCED	
Raw Score	Scale Score
77	250
78	254
79	257
80	260
81	264
82	267
83	271
84	275
85	279
86	283
87	288
88	293
89	298
90	304
91	311
92	318
93	326
94	335
95	346
96	359
97	375
98	397
99	434
100	496

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

BELOW BASIC	
Raw Score	Scale Score
0	1
1	12
2	18
3	36
4	50
5	60
6	70
7	77
8	84
9	91
10	96
11	102
12	106
13	111
14	115
15	119
16	123
17	127
18	131
19	134
20	137
21	141
22	144
23	147
24	150
25	153

BASIC	
Raw Score	Scale Score
26	155
27	158
28	160
29	163
30	165
31	168
32	170
33	173
34	175
35	177
36	180
37	182
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	205
49	207
50	209
51	211
52	213
53	215
54	216
55	218
56	220
57	222
58	224
59	225
60	227
61	229
62	231
63	232
64	234
65	236
66	238
67	239
68	241
69	243
70	245
71	247
72	249

ADVANCED	
Raw Score	Scale Score
73	250
74	251
75	252
76	254
77	256
78	258
79	260
80	262
81	264
82	267
83	269
84	272
85	274
86	277
87	280
88	283
89	287
90	290
91	294
92	299
93	303
94	309
95	315
96	323
97	333
98	347
99	372
100	414