



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 2011 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 January 2011 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 2011 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 2011 administration of the End-of-Course Examinations and does NOT apply to any other administration.**

2011 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

2011 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

2011 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:

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4 State Capitol Mall, Room 106A
Little Rock, AR 72201-1071
Telephone: 501-682-4558

2011 Algebra I Mid-Year End-of-Course Examination Raw to Scale Score Conversion Tables

BELOW BASIC	
Raw Score	Scale Score
0	0
1	13
2	19
3	23
4	26
5	39
6	49
7	59
8	67
9	74
10	81
11	87
12	93
13	99
14	104
15	109
16	113
17	118
18	122
19	126
20	130
21	134
22	138
23	141
24	145

BASIC	
Raw Score	Scale Score
25	151
26	153
27	155
28	159
29	162
30	165
31	168
32	170
33	173
34	176
35	178
36	181
37	183
38	186
39	188
40	191
41	193
42	195
43	198

PROFICIENT	
Raw Score	Scale Score
44	200
45	202
46	204
47	206
48	208
49	210
50	212
51	214
52	215
53	217
54	219
55	221
56	223
57	224
58	226
59	228
60	230
61	232
62	234
63	236
64	238
65	240
66	242
67	244
68	247
69	249

ADVANCED	
Raw Score	Scale Score
70	250
71	253
72	255
73	257
74	260
75	262
76	264
77	266
78	269
79	271
80	274
81	277
82	279
83	282
84	285
85	288
86	292
87	295
88	299
89	303
90	308
91	312
92	318
93	323
94	330
95	338
96	347
97	359
98	375
99	401
100	447

2011 Geometry Mid-Year End-of-Course Examination Raw to Scale Score Conversion Tables

BELOW BASIC	
Raw Score	Scale Score
0	2
1	12
2	18
3	39
4	53
5	64
6	73
7	81
8	88
9	94
10	100
11	105
12	109
13	113
14	117
15	121
16	124
17	127
18	130
19	133
20	136
21	139
22	141
23	144
24	146
25	149
26	151

BASIC	
Raw Score	Scale Score
27	154
28	156
29	158
30	161
31	163
32	165
33	168
34	170
35	172
36	175
37	177
38	179
39	182
40	184
41	186
42	189
43	191
44	193
45	195
46	198

PROFICIENT	
Raw Score	Scale Score
47	200
48	202
49	204
50	206
51	208
52	210
53	212
54	214
55	215
56	217
57	219
58	221
59	223
60	225
61	226
62	228
63	230
64	232
65	234
66	235
67	237
68	239
69	241
70	243
71	244
72	246
73	248

ADVANCED	
Raw Score	Scale Score
74	250
75	251
76	252
77	254
78	256
79	258
80	260
81	262
82	264
83	267
84	269
85	272
86	275
87	277
88	281
89	284
90	288
91	292
92	296
93	302
94	308
95	315
96	323
97	334
98	350
99	375
100	419

**2011 Biology Mid-Year End-of-Course Examination
Raw to Scale Score Conversion Tables**

BELOW BASIC	
Raw Score	Scale Score
0	0
1	6
2	12
3	18
4	24
5	36
6	46
7	55
8	62
9	69
10	75
11	81
12	86
13	91
14	96
15	100
16	104
17	108
18	112
19	115
20	119
21	122
22	125
23	128
24	131
25	134
26	137
27	139
28	142
29	144

BASIC	
Raw Score	Scale Score
30	147
31	149
32	151
33	154
34	156
35	158
36	160
37	162
38	164
39	166
40	168
41	170
42	172
43	174
44	176
45	178
46	180
47	182
48	183
49	185
50	187
51	189
52	191
53	193
54	195
55	196
56	198

PROFICIENT	
Raw Score	Scale Score
57	200
58	202
59	204
60	206
61	208
62	210
63	212
64	214
65	216
66	218
67	220
68	222
69	224
70	227
71	229
72	231
73	234
74	236
75	239
76	241
77	244
78	247

ADVANCED	
Raw Score	Scale Score
79	250
80	253
81	256
82	259
83	262
84	266
85	270
86	274
87	278
88	282
89	287
90	293
91	298
92	305
93	312
94	320
95	330
96	341
97	356
98	377
99	413
100	474