



Arkansas Comprehensive Testing, Assessment, and Accountability Program

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

Raw To Scale Score Conversion Tables

January 2010 Administration

Introduction

The Raw to Scale Score Conversion Tables provide information on raw scores attained by students for the Mid-Year 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 2010 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 2010 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 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 different 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 one subject differs from the results for another subject, and 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 table below lists 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 2010 administration of the Mid-Year End-of-Course Examinations and does NOT apply to any other administration.**

2010 Algebra I Mid-Year End-of-Course Examination Scale Score Ranges

Performance Levels	EOC Algebra I Scale Scores
Below Basic	0–150
Basic	151–199
Proficient	200–249
Advanced	250 and above

2010 Geometry Mid-Year End-of-Course Examination Scale Score Ranges

Performance Levels	EOC Geometry Scale Scores
Below Basic	0–153
Basic	154–199
Proficient	200–249
Advanced	250 and above

2010 Biology Mid-Year End-of-Course Examination Scale Score Ranges

Performance Levels	EOC Algebra I Scale Scores
Below Basic	0–145
Basic	146–199
Proficient	200–249
Advanced	250 and above

The Report Interpretation Guide for the *Mid-Year End-of-Course Examinations* contain more information on the performance levels. For additional information about the results and information on student performance, please contact

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2010 Algebra I Mid-Year 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	23
5	36
6	47
7	57
8	65
9	73
10	80
11	86
12	93
13	98
14	104
15	109
16	114
17	118
18	123
19	127
20	131
21	135
22	139
23	143
24	147

BASIC	
Raw Score	Scale Score
25	151
26	154
27	157
28	159
29	164
30	167
31	170
32	173
33	176
34	179
35	181
36	184
37	186
38	189
39	191
40	194
41	196
42	198

PROFICIENT	
Raw Score	Scale Score
43	200
44	202
45	204
46	206
47	208
48	210
49	212
50	214
51	216
52	218
53	219
54	221
55	223
56	225
57	227
58	228
59	230
60	232
61	234
62	236
63	238
64	240
65	242
66	244
67	246
68	248

ADVANCED	
Raw Score	Scale Score
69	250
70	252
71	255
72	257
73	259
74	262
75	265
76	267
77	270
78	273
79	276
80	279
81	283
82	286
83	290
84	294
85	298
86	302
87	306
88	311
89	316
90	321
91	327
92	333
93	340
94	347
95	356
96	366
97	379
98	397
99	430
100	491

2010 Geometry Mid-Year End-of-Course Examination Raw to Scale Score Conversion Tables

BELOW BASIC	
Raw Score	Scale Score
0	0
1	10
2	19
3	38
4	52
5	63
6	72
7	80
8	87
9	94
10	99
11	105
12	110
13	114
14	118
15	123
16	126
17	130
18	134
19	137
20	140
21	144
22	147
23	150

BASIC	
Raw Score	Scale Score
24	154
25	155
26	158
27	161
28	164
29	166
30	169
31	171
32	174
33	177
34	179
35	182
36	184
37	186
38	189
39	191
40	194
41	196

PROFICIENT	
Raw Score	Scale Score
42	200
43	201
44	203
45	206
46	208
47	211
48	213
49	215
50	218
51	220
52	222
53	225
54	227
55	229
56	231
57	233
58	235
59	237
60	239
61	241
62	243
63	245
64	247

ADVANCED	
Raw Score	Scale Score
65	250
66	252
67	254
68	256
69	258
70	260
71	262
72	264
73	266
74	268
75	271
76	273
77	275
78	277
79	280
80	282
81	284
82	286
83	289
84	291
85	293
86	296
87	298
88	301
89	303
90	306
91	309
92	313
93	317
94	321
95	326
96	333
97	342
98	356
99	381
100	429

2010 Biology Mid-Year End-of-Course Examination Raw to Scale Score Conversion Tables

BELOW BASIC	
Raw Score	Scale Score
0	0
1	2
2	5
3	8
4	11
5	14
6	25
7	34
8	42
9	49
10	55
11	61
12	67
13	72
14	76
15	81
16	85
17	89
18	93
19	97
20	101
21	104
22	107
23	110
24	114
25	117
26	119
27	122
28	125
29	128
30	130
31	133
32	136
33	138
34	141
35	143

BASIC	
Raw Score	Scale Score
36	146
37	148
38	150
39	153
40	155
41	157
42	160
43	162
44	164
45	167
46	169
47	171
48	174
49	176
50	178
51	181
52	183
53	185
54	187
55	190
56	192
57	194
58	197

PROFICIENT	
Raw Score	Scale Score
59	200
60	202
61	204
62	206
63	209
64	211
65	214
66	216
67	219
68	221
69	224
70	226
71	229
72	231
73	234
74	237
75	240
76	242
77	245
78	248

ADVANCED	
Raw Score	Scale Score
79	250
80	254
81	258
82	261
83	265
84	268
85	272
86	276
87	280
88	285
89	290
90	295
91	301
92	307
93	315
94	323
95	333
96	344
97	360
98	381
99	416
100	478