ACTAAP

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 2009 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 2009 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 2009 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 two 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 2009 administration of the Mid-Year End-of-Course Examinations and <u>does NOT apply</u> to any other administration.**

2009 *Algebra I Mid-Year End-of-Course Examination* Scale Score Ranges

Performance Levels	EOC Algebra I Scale Scores
Below Basic	0–151
Basic	152–199
Proficient	200–249
Advanced	250–476

2009 *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	250–428

2009 *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	250–519

The Report Interpretation Guide for the *Mid-Year End-of-Course Examinations* contain 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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2009 Algebra Mid-Year 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	30
5	43
6	54
7	64
8	72
9	80
10	86
11	93
12	99
13	104
14	110
15	115
16	119
17	124
18	128
19	133
20	137
21	141
22	144
23	148

BASIC	
Raw Score	Scale Score
24	152
25	155
26	158
27	162
28	165
29	168
30	171
31	174
32	177
33	179
34	182
35	184
36	187
37	189
38	192
39	194
40	197

PROFICIENT	
Raw Score	Scale Score
41	200
42	201
43	203
44	205
45	208
46	210
47	212
48	214
49	216
50	219
51	221
52	223
53	225
54	227
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	252
66	254
67	256
68	258
69	260
70	262
71	264
72	266
73	268
74	270
75	272
76	274
77	276
78	278
79	280
80	282
81	284
82	287
83	289
84	292
85	294
86	297
87	300
88	303
89	307
90	310
91	315
92	319
93	325
94	331
95	339
96	349
97	362
98	381
99	415
100	476

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2009 Geometry Mid-Year End-of-Course Examination
Raw to Scale Score Conversion Tables

BELOW BASIC	
Raw Score	Scale Score
0	0
1	10
2	20
3	39
4	52
5	63
6	72
7	80
8	87
9	93
10	99
11	104
12	109
13	114
14	118
15	122
16	126
17	130
18	133
19	137
20	140
21	143
22	146
23	149
24	151

BASIC	
Raw Score	Scale Score
25	154
26	156
27	159
28	161
29	163
30	165
31	167
32	169
33	171
34	173
35	175
36	176
37	178
38	179
39	181
40	183
41	184
42	186
43	187
44	189
45	190
46	192
47	193
48	195
49	196
50	198

PROFICIENT	
Raw Score	Scale Score
51	200
52	201
53	203
54	205
55	206
56	208
57	210
58	211
59	213
60	215
61	216
62	218
63	219
64	221
65	223
66	224
67	226
68	228
69	230
70	231
71	233
72	235
73	237
74	239
75	241
76	243
77	245
78	247

ADVANCED	
Raw Score	Scale Score
79	250
80	252
81	254
82	257
83	259
84	262
85	265
86	268
87	272
88	275
89	279
90	283
91	288
92	293
93	298
94	305
95	312
96	321
97	332
98	348
99	377
100	428

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2009 Biology Mid-Year End-of-Course Examination
Raw to Scale Score Conversion Tables

BELOW BASIC	
Raw Score	**Scale Score**
0	0
1	4
2	8
3	13
4	18
5	31
6	41
7	50
8	57
9	64
10	71
11	77
12	82
13	87
14	92
15	97
16	101
17	105
18	109
19	113
20	117
21	120
22	124
23	127
24	131
25	134
26	137
27	140
28	143

BASIC	
Raw Score	**Scale Score**
29	146
30	149
31	152
32	155
33	158
34	160
35	163
36	166
37	168
38	171
39	174
40	176
41	179
42	181
43	184
44	187
45	189
46	192
47	194
48	197

PROFICIENT	
Raw Score	**Scale Score**
49	200
50	202
51	204
52	206
53	209
54	211
55	214
56	216
57	219
58	221
59	224
60	226
61	229
62	231
63	234
64	236
65	239
66	241
67	244
68	247

ADVANCED	
Raw Score	**Scale Score**
69	250
70	252
71	255
72	258
73	261
74	263
75	266
76	269
77	273
78	276
79	279
80	282
81	286
82	289
83	293
84	297
85	301
86	306
87	310
88	315
89	320
90	326
91	332
92	339
93	347
94	356
95	367
96	379
97	396
98	418
99	456
100	519