



Arkansas Comprehensive Testing, Assessment, and Accountability Program

**End-of-Course Examinations for Algebra I and Geometry  
Raw To Scale Score Conversion Tables  
April 2008 Administration**

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## **Introduction**

The *Raw to Scale Score Conversion Tables* provide information on raw scores attained by students for Algebra I and Geometry on the 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 April 2008 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 and a specific score for Geometry 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.

## April 2008 Scale Scores

The attached *Raw to Scale Score Conversion Tables* list the total number of raw score points available for Algebra I and Geometry as well as the associated scale scores for the two content areas. While the scale scores for the two content areas are listed in conjunction with similar raw score scales, it is important to understand that the scale scores for the two 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 and Geometry. The overall distribution of student performance results for Algebra I differs from the results for Geometry, 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 two 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 End-of-Course Examinations. **Again, the scale score information listed in these tables is specific to the April 2008 administration of the End-of-Course Examinations and does NOT apply to any other administration.**

### ***2008 Algebra I End-of-Course Examination Scale Score Ranges***

<b>Performance Levels</b>	<b>EOC Algebra I Scale Scores</b>
Below Basic	151 & below
Basic	152–199
Proficient	200–249
Advanced	250 & above

### ***2008 Geometry End-of-Course Examination Scale Score Ranges***

<b>Performance Levels</b>	<b>EOC Geometry Scale Scores</b>
Below Basic	151 & below
Basic	152–199
Proficient	200–249
Advanced	250 & above

The Report Interpretation Guide for the *Algebra I* and *Geometry 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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## 2008 Algebra I End-of-Course Examination Raw to Scale Score Conversion Tables

BELOW BASIC	
Raw Score	Scale Score
0	0
1	7
2	14
3	21
4	37
5	50
6	61
7	71
8	79
9	87
10	94
11	100
12	106
13	112
14	117
15	122
16	127
17	132
18	136
19	140
20	144
21	148

BASIC	
Raw Score	Scale Score
22	152
23	155
24	159
25	162
26	166
27	169
28	172
29	175
30	178
31	181
32	184
33	187
34	190
35	192
36	195
37	198

PROFICIENT	
Raw Score	Scale Score
38	200
39	203
40	205
41	208
42	210
43	212
44	214
45	217
46	219
47	221
48	223
49	225
50	227
51	229
52	231
53	234
54	236
55	238
56	240
57	242
58	244
59	246
60	248

ADVANCED	
Raw Score	Scale Score
61	250
62	251
63	253
64	255
65	257
66	259
67	261
68	263
69	265
70	267
71	269
72	271
73	273
74	275
75	277
76	279
77	282
78	284
79	286
80	288
81	290
82	293
83	295
84	298
85	300
86	303
87	306
88	310
89	314
90	318
91	323
92	328
93	335
94	342
95	351
96	362
97	376
98	395
99	428
100	487



## 2008 Geometry End-of-Course Examination Raw to Scale Score Conversion Tables

BELOW BASIC	
Raw Score	Scale Score
0	0
1	10
2	21
3	40
4	54
5	65
6	75
7	83
8	90
9	96
10	102
11	108
12	113
13	117
14	122
15	126
16	130
17	133
18	137
19	140
20	143
21	146
22	149

BASIC	
Raw Score	Scale Score
23	152
24	155
25	158
26	160
27	163
28	165
29	168
30	170
31	172
32	174
33	177
34	179
35	181
36	183
37	185
38	187
39	189
40	191
41	194
42	196
43	198

PROFICIENT	
Raw Score	Scale Score
44	200
45	202
46	204
47	206
48	208
49	210
50	212
51	214
52	216
53	218
54	220
55	222
56	224
57	226
58	228
59	230
60	232
61	234
62	236
63	238
64	240
65	243
66	245
67	247

ADVANCED	
Raw Score	Scale Score
68	250
69	251
70	253
71	255
72	257
73	260
74	262
75	264
76	267
77	269
78	271
79	274
80	277
81	279
82	282
83	285
84	288
85	292
86	295
87	299
88	303
89	307
90	311
91	316
92	322
93	328
94	335
95	343
96	353
97	364
98	381
99	408
100	455

