



Technical Report on the New Enhanced ACT[®] and PreACT[®] Suite of Exams

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This technical document outlines how the new enhanced ACT[®] and PreACT[®] suite of assessments are formatted and scored in Progress Learning. It details changes to the format, including timing, item distribution, and passage lengths for the English, Math, and Reading Tests. Additionally, it explains how scaled scores are calculated using re-scaling and Conditional Standard Error of Measurement (CSEM) values. Finally, the document describes how Progress Learning has updated their benchmark assessments and scaled score charts to align with the new ACT and PreACT.

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Overall Changes to Timing and Test Length

The enhanced formats of the ACT and PreACT give students significantly more time per item, as shown in the following tables. The ACT is now 10 minutes shorter with 44 fewer items, while the PreACT has the same number of items but a longer testing time.

In addition to these changes in timing, there are significant revisions to the English and Math Tests, as well as modest revisions to the Reading Test. While the Science Test is included in these tables, it is now optional, so students may choose to take the ACT without Science.

PREVIOUS FORMAT				ENHANCED FORMAT				
ACT Total								
	# of Items	Minutes	Seconds/Item		# of Items	Minutes	Seconds/Item	% Increase Sec/Item
Total	215	175	49	Total	171	165	58	18.37%
English	75	45	36	English	50	35	42	16.67%
Math	60	60	60	Math	45	50	67	11.67%
Reading	40	35	53	Reading	36	40	67	26.42%
Science	40	35	53	Science	40	40	60	13.21%
PreACT 10 Total								
	# of Items	Minutes	Seconds/Item		# of Items	Minutes	Seconds/Item	% Increase Sec/Item
Total	136	130	57	Total	136	155	68	19.30%
English	45	30	40	English	45	35	47	16.67%
Math	36	40	67	Math	36	45	75	11.94%
Reading	25	30	72	Reading	25	35	84	16.67%
Science	30	30	60	Science	30	40	80	33.33%
PreACT 8/9 Total								
	# of Items	Minutes	Seconds/Item		# of Items	Minutes	Seconds/Item	% Increase Sec/Item
Total	130	130	60	Total	130	160	74	23.33%
English	40	30	45	English	40	35	53	16.67%
Math	35	40	69	Math	35	45	77	11.80%
Reading	25	30	72	Reading	25	40	96	33.33%
Science	30	30	60	Science	30	40	80	33.33%



Revised Length & Distribution

The length of the new English Test has been significantly reduced. There are fewer items and some passages have been shortened. The distribution of different item types on the test has also changed, as shown in the chart below.

	PREVIOUS FORMAT		ENHANCED FORMAT	
ACT Total				
	# of Items	% of Total Test	# of Items	% of Total Test
Standard English Conventions	39-41	~53%	20	40%
Grammar	10-15	~18%	6-8	~13%
Sentence Structure	10-15	~18%	6-8	~13%
Punctuation	10-15	~18%	6-8	~13%
Production of Writing	22-24	~30%	20	40%
Writing Strategy	10-12	~15%	8-12	~20%
Organization	10-12	~15%	8-12	~20%
Knowledge of Language	11-13	~17%	10	20%
PreACT 10 Total				
	# of Items	% of Total Test	# of Items	% of Total Test
Standard English Conventions	23-25	~53%	18	40%
Grammar	7-9	~18%	5-7	~13%
Sentence Structure	7-9	~18%	5-7	~13%
Punctuation	7-9	~18%	5-7	~13%
Production of Writing	13-15	~31%	18	40%
Writing Strategy	6-8	~15%	8-10	~20%
Organization	6-8	~15%	8-10	~20%
Knowledge of Language	6-8	~16%	9	20%
PreACT 8/9 Total				
	# of Items	% of Total Test	# of Items	% of Total Test
Standard English Conventions	16-18	~53%	16	40%
Grammar	5-7	~18%	4-6	~13%
Sentence Structure	5-7	~18%	4-6	~13%
Punctuation	5-7	~18%	4-6	~13%
Production of Writing	9-11	~30%	16	40%
Writing Strategy	4-6	~15%	7-9	~20%
Organization	4-6	~15%	7-9	~20%
Knowledge of Language	4-6	~17%	8	20%



New Item Stems

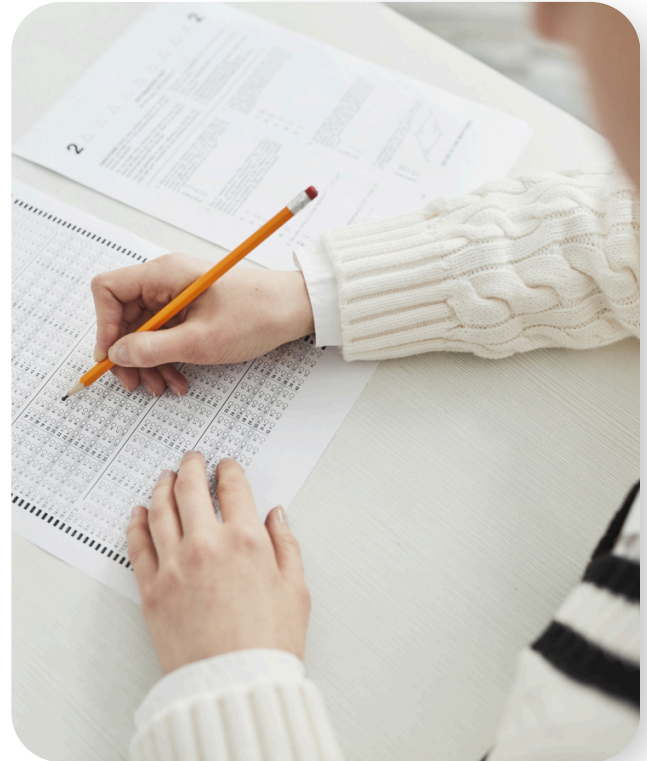
In the previous format of the English Test, some items had stems posing specific questions, while others only corresponded to an underlined portion and asked students to choose how to revise it. In the enhanced format, every English item has a stem.

Shorter Passages

Average passage lengths have been reduced. However, officially released materials from the ACT have inconsistent information about the extent of the reduction.

At least one published document from the ACT indicates that the English Test will consist of three 10-item passages, two 5-item passages, and then either one additional 10-item passage or two additional 5-item passages for unscored experimental content. However, the official practice test published by the ACT features one 15-item passage, three 10-item passages, and one 5-item passage.

Because the official practice test likely reflects the actual planned revisions more accurately than the published document, we based our ACT blueprint on the practice test format.



Updates to Progress Learning ACT/PreACT English Content

Since the total number of items has been significantly reduced, Progress Learning's English Tests were revised mainly by removing existing items and shortening passages. When determining removals, we considered both the overall distribution of item types across the test as well as individual item parameters. Items that exhibited low discriminance (i.e., did not effectively distinguish between higher- and lower-performing students) or other quality issues were preferentially removed. Some passages were shortened around removed items.

While no new item types were added to the English Test, some new items were still composed during form (full test booklet) revisions. For ACT forms, only a small number of new items were composed. Because revised PreACT forms are estimated to have a similar number of items overall but a significantly revised distribution of items, a larger number of new items were composed for PreACT forms.

In addition, all items that did not already have stems received standardized stems, according to the type and context of each item.

Finally, new scaled score charts were produced using collected student response data.



Math

Revised Length & Distribution

The length of the Math Test has been significantly reduced, and the distribution of item types has changed, as shown in the table below.

	PREVIOUS FORMAT		ENHANCED FORMAT	
ACT Total				
	# of Items	% of Total Test	# of Items	% of Total Test
Preparing for Higher Math	34-36	~58%	25-29	~63%
Number & Quantity	5-7	~10%	3-5	~9%
Algebra	7-9	~13%	5-8	~15%
Functions	7-9	~13%	5-8	~15%
Geometry	7-9	~13%	5-8	~15%
Statistics & Probability	5-7	~10%	3-5	~9%
Integrating Essential Skills	24-26	~42%	16-20	~35%
PreACT 10 Total				
	# of Items	% of Total Test	# of Items	% of Total Test
Preparing for Higher Math	21	~58%	25-27	~72%
Number & Quantity	3-5	~11%	2-5	~10%
Algebra	4-6	~14%	5-8	~17%
Functions	4-6	~14%	5-8	~17%
Geometry	3-5	~14%	5-8	~17%
Statistics & Probability	3-5	~14%	2-5	~10%
Integrating Essential Skills	15	~42%	9-11	~28%
PreACT 8/9 Total				
	# of Items	% of Total Test	# of Items	% of Total Test
Preparing for Higher Math	27-29	~80%	27-29	~78%
Number & Quantity	2-5	~10%	2-5	~10%
Algebra	5-8	~19%	5-8	~19%
Functions	5-8	~19%	5-8	~19%
Geometry	5-8	~19%	5-8	~19%
Statistics & Probability	2-5	~10%	2-5	~10%
Integrating Essential Skills	6-8	~20%	6-8	~22%

Note: The figures presented here do not precisely match those in the ACT Technical Manual. The ACT Technical Manual includes experimental items in its counts for some forms (such as the ACT itself) but not for others (such as the PreACT 8/9), and does not provide a detailed official breakdown of PHM types for the PreACT 8/9. This table shows different numbers primarily because it standardizes their presentation, and additional figures are based on reviews of available official test resources.



Math

Fewer Distractors

Previously, each Math item had 5 answer options: 1 correct option, and 4 distractors. The number of distractors has been reduced to 3, so that each math item now has 4 answer options in total.

In most cases, the least attractive distractor (i.e., the incorrect answer option that students were least likely to select) has been removed.

Updates to Progress Learning's ACT/PreACT Math Content



Since the overall length of the ACT Math Test has been substantially reduced, the desired distribution of items was achieved mostly by cutting items. Once again, items with low discriminance were preferentially eliminated. The overall difficulty of the existing forms was on the high end, so in general, more difficult items were preferentially removed. Some new items were also composed to reduce item complexity.



Detailed official blueprints for PreACT Math forms were not available. However, we inferred from language in official documentation that referred to harmonizing formats and vertically aligning the ACT suite that the differences in item distribution should be smoothed somewhat across forms. After selecting items for removal, composing new items, and removing distractors, items were reordered to create a smoother difficulty progression across the form.

Finally, new scaled score charts were produced using collected student response data.



Reading

Revised Length & Distribution

The ACT Reading Test has been slightly shortened and the distribution of item types has changed, as shown in the table below. These changes are subtle enough that we don't anticipate significant overall revisions to the shorter PreACT forms. Based on released information about overall test time, we don't believe the Reading Tests on the PreACT forms will be significantly shortened, as the enhanced time already provides an increased time-per-item that is comparable to the increased time-per-item on the ACT.

	PREVIOUS FORMAT		ENHANCED FORMAT	
ACT Total				
	# of Items	% of Total Test	# of Items	% of Total Test
Key Ideas & Details	21-24	~56%	19-22	~55%
Craft & Structure	10-12	~27%	8-10	~24%
Integration of Knowledge & Ideas	6-9	~17%	6-9	~21%
PreACT 10 Total				
	# of Items	% of Total Test	# of Items	% of Total Test
Key Ideas & Details	13-15	~55%	13-15	~55%
Craft & Structure	7-9	~31%	7-9	~31%
Integration of Knowledge & Ideas	2-4	~14%	3-4	~14%
PreACT 8/9 Total				
	# of Items	% of Total Test	# of Items	% of Total Test
Key Ideas & Details	13-15	~55%	13-15	~55%
Craft & Structure	7-9	~31%	7-9	~31%
Integration of Knowledge & Ideas	2-4	~14%	3-4	~14%

Updates to Progress Learning Reading Content

Items were cut to satisfy revised item distributions. Once again, items with low discriminance or other performance issues were preferentially cut. Additionally, some items that were not performing as intended were replaced or revised.

New scaled score charts were produced using student response data.



The Science Test is now optional. The ACT still has 40 items, but has increased in time from 35 to 40 minutes, while the PreACT still has 30 items but has increased in time from 30 to 40 minutes.

Updates to Progress Learning's ACT/PreACT Science Content

Because the format has remained largely unchanged, existing Science forms have not been modified.

New scaled score charts were produced using student response data.

How Scaled Scores Are Determined

Scores on the ACT and PreACT are reported as scaled scores (1–36 for the ACT and 1–35 for the PreACT), rather than raw scores. Raw scores (the number of correct answers) are converted to scaled scores to ensure fairness and consistency across different versions of the exam.

Progress Learning produced new scaled score charts to ensure our benchmark assessment scores align with the official ACT and PreACT scores. The following sections describe the process we used to produce scaled score charts for our ACT and PreACT benchmark assessments, including re-scaling and applying Conditional Standard Error of Measurement (CSEM) to create score ranges.



Re-Scaling

Student response data was used to generate new scaled score charts for each section. However, because the scaled score charts represent modified exams, rather than the exact exams administered, scales could not be directly obtained from the raw scores in the testing data. Instead, student response data was used to estimate item parameters for existing items on each form, and new items were estimated to have parameters similar to comparable existing items.

Then, an Item Response Theory model was used to predict raw student performance on the revised exam forms, and scaled score charts were constructed to produce similar median scores and standard deviations to official exams.

Finally, the model-based scaled score charts were smoothed to eliminate distortions in the model-based approach. For example, the model underestimates the number of students scoring at the very low end, so the bottom levels of the chart have been manually adjusted to ensure raw scores close to zero correspond to scaled scores close to one.

CSEM and Score Range

Official score reports from ACT Inc. display scaled scores with score ranges. These score ranges are equal to the scaled score a student attains plus or minus the Conditional Standard Error of Measurement (CSEM) for that point on the scale. For example, if a student scores a 22 on the English Test, the CSEM would be 2. The score range for this student would therefore be 22 ± 2 , or 20-24.

The following table of data published by ACT Inc. shows CSEM values for ACT and PreACT scores:

	English	Math	Reading	Science		English	Math	Reading	Science
1	2	1	2	2	19	2	2	2	2
2	2	1	2	2	20	2	2	2	2
3	2	1	2	2	21	2	2	3	2
4	2	1	2	2	22	2	2	3	2
5	2	1	2	2	23	2	2	3	2
6	2	1	2	2	24	2	2	3	2
7	2	1	2	2	25	2	2	3	3
8	2	1	2	2	26	2	2	3	3
9	2	1	2	2	27	3	2	3	3
10	2	1	2	2	28	3	3	3	3
11	2	1	2	2	29	3	3	3	3
12	2	1	2	2	30	3	3	3	3
13	2	1	2	2	31	3	3	3	3
14	2	1	2	2	32	3	3	3	3
15	2	1	2	2	33	3	3	3	3
16	2	1	2	2	34	2	2	2	2
17	2	1	2	2	35	1	1	1	1
18	2	2	2	2					

These ranges approximately represent 68% confidence intervals, meaning a student who scores 22 on the English Test would be expected to attain a score of 20-24 about 68% of the time if they were to take the test again under similar conditions without improving their skills. However, reported CSEMs have often been rounded and/or adjusted to better conform to the ideal scales, which somewhat reduces their precision.

Scaled Score Charts

Progress Learning produced a total of nine scaled score charts—three ACT tests, three PreACT 10 tests, and three PreACT 8/9 tests.

With these updated charts, schools and districts get a clear, reliable picture of performance so they can confidently see where students stand and what support is needed to improve.

Below is the scaled score chart for ACT Benchmark Assessment #1 by Progress Learning. [See this document for all nine scaled score charts.](#)

<i>Scaled</i>	Test 1 English <i>Raw</i>	Test 2 Math <i>Raw</i>	Test 3 Reading <i>Raw</i>	Test 4 Science <i>Raw</i>	<i>Scaled</i>	Test 1 English <i>Raw</i>	Test 2 Math <i>Raw</i>	Test 3 Reading <i>Raw</i>	Test 4 Science <i>Raw</i>
36	50	44-45	36	38-40	18	19	19	18	14
35	49	43	–	37	17	18	18	17	13
34	48	42	35	36	16	17	17	16	12
33	–	40-41	–	34-35	15	16	16	15	11
32	47	39	34	33	14	15	15	14	10
31	46	38	–	32	13	14	14	13	9
30	45	37	33	31	12	13	13	12	8
29	43-44	35-36	–	29-30	11	12	12	11	7
28	41-42	34	32	28	10	11	11	10	6
27	39-40	32-33	–	26-27	9	10	10	9	5
26	36-38	31	31	25	8	9	9	8	4
25	34-35	29-30	30	23-24	7	8	8	7	3
24	31-33	27-28	28-29	21-22	6	7	7	6	–
23	29-30	26	26-27	20	5	6	6	5	2
22	27-28	24-25	24-25	19	4	4-5	5	4	–
21	24-26	22-23	21-23	17-18	3	1-2	4	3	1
20	22-23	21	20	16	2	1-1	2-3	2	–
19	20-21	20	19	15	1	0-1	0-1	0-1	0

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