Alaska

Comprehensive System of Student Assessment
Standards Based Assessments (SBA)

Mathematics Practice Test Scoring Guide

Grade 3

Alaska Department of Education & Early Development

Mathematics Practice Test Scoring Guide
with Answer Keys, Scoring Guidelines, and Sample Papers

General Introduction

The Alaska Department of Education and Early Development (EED), in cooperation with Data Recognition Corporation, designed and produced the Alaska Practice Test to support students in doing their best on the Alaska Comprehensive System of Student Assessment, *Standards Based Assessments* in grades 3 through 9. A scoring guide, with answer keys, scoring guidelines, sample student papers, and a test map, provides the teacher with information and tools to score each practice test.

Content

A *Practice Test Scoring Guide* for each grade level and subject area is posted on the EED Website (http://www.eed.state.ak.us/tls/assessment). To access this website, follow these instructions.

Directions to access the AK EED Website

1. Type or copy and paste the link to the Alaska EED Website into your browser. http://www.eed.state.ak.us/tls/assessment
2. Select Standards Based Assessments.
3. Select Item Samplers / Practice Tests.
4. Select the grade-level assessment (or other document) you wish to download.
5. At this point you may save the file to your computer or print the file directly from the website. Printing from the website can be very time consuming. It is likely you will want to save the file(s) to your computer, then print.

This guide is divided into two sections. Section I includes the answer keys and scoring guidelines (with detailed item-specific scoring rubrics for scoring short and extended constructed-response questions), and sample student papers with annotations for each score point. Section II presents a grade-level test map that lists item sequence, corresponding Grade Level Expectation, and an answer key.

Purpose

The passages, stimuli, prompts, graphs, charts, and items included for each content-area practice test were created for use in Alaska classrooms. These materials may be copied and used as part of a local instructional program.* Alaska educators may use the reading, writing, and mathematics practice tests, the *Practice Test Administration Directions*, and the *Practice Test Scoring Guides* to support daily instruction in the classroom and to prepare their students for the operational standards based assessments.

Important: The practice tests were developed for usability purposes only, and in no way should the tests or scores students receive be considered a predictor of a student's ability to perform on the operational *Standards Based Assessments*. Passages, prompts, stimuli, and items provide samples of what students will see on the operational tests. Items are not necessarily the same in terms of measurement, rigor, or the length of time it takes a student to respond.

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Item Format

The mathematics practice test includes two types of mathematics items: multiple choice and constructed response. Practice test multiple-choice items have four answer options. The correct response to each multiple-choice item is worth one point.

Two types of constructed-response items are presented in the mathematics practice test: short constructed response (SCR) are 2-point items; extended constructed response (ECR) are 4-point items. Item-specific scoring guidelines and examples of responses for each score point are presented with each constructed-response item.

Measurement items are not included in the mathematics practice test because teachers will download the practice tests from the Alaska Education and Early Development Website (http://www.eed.state.ak.us/tls/assessment) and print them on local computers. When printing occurs using local computers, measurement items (that require a ruler) may be scaled differently from the actual figure that appears on the PDF, and true measurement cannot be achieved. Teachers are encouraged, however, to include measurement items on their regular classroom tests.

Scoring Guidelines

Following the multiple-choice answer key are general scoring rubrics for 2-point and 4-point constructed-response items. The general scoring rubric includes item-specific guidelines to assist the teacher with scoring constructed-response items.

Sample student papers are included for each short and extended constructed-response score point. An item-specific annotation follows each sample student response. The annotations are designed to provide the teacher with the explanation of why the score point was awarded.

Test Maps

The test map presents the sequence of the items, the Grade Level Expectation to which each item is aligned, and the answer key. This at-a-glance chart is designed to assist the teacher with scoring the practice test.

1. D
2. B
3. C
4. D
5. C

This problem is worth 2 points.

6. The pictograph below shows the number of books 4 students read.

Number of Books Read

Carl	
Kim	
Nick	
Sheila	

Key:  = 4 books

How many books did Sheila read? Show all of your work and write your answer in the box below.

Answer: _____ **books**

6. Short Constructed Response

Score	Rubric
2	2 of 2 parts correct
1	1 of 2 parts correct OR Some correct or relevant work or explanation
0	Response is totally incorrect or irrelevant

- 1 point for all correct work (procedure) shown
- 1 point for correct answer

Problem Solution:

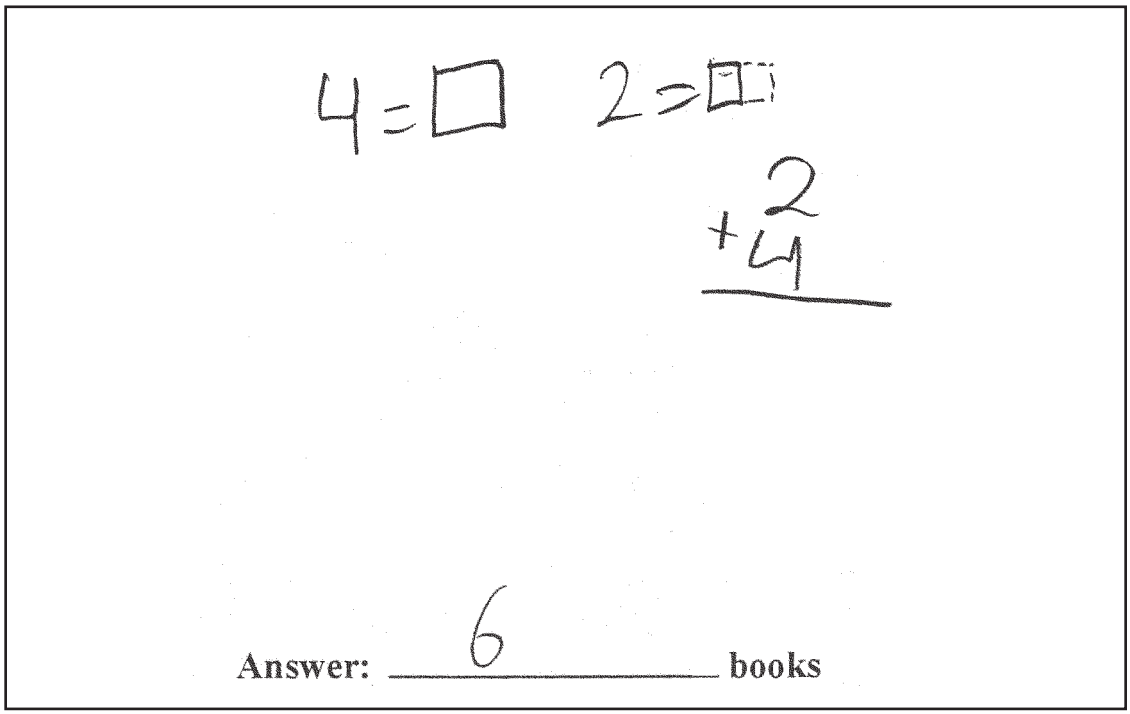
- 4 + 2 OR equivalent work (may just have "whole 4 plus half 4")

  AND

- **6** (books)

Item #6 **Response Score: 2**

Short Constructed Response:



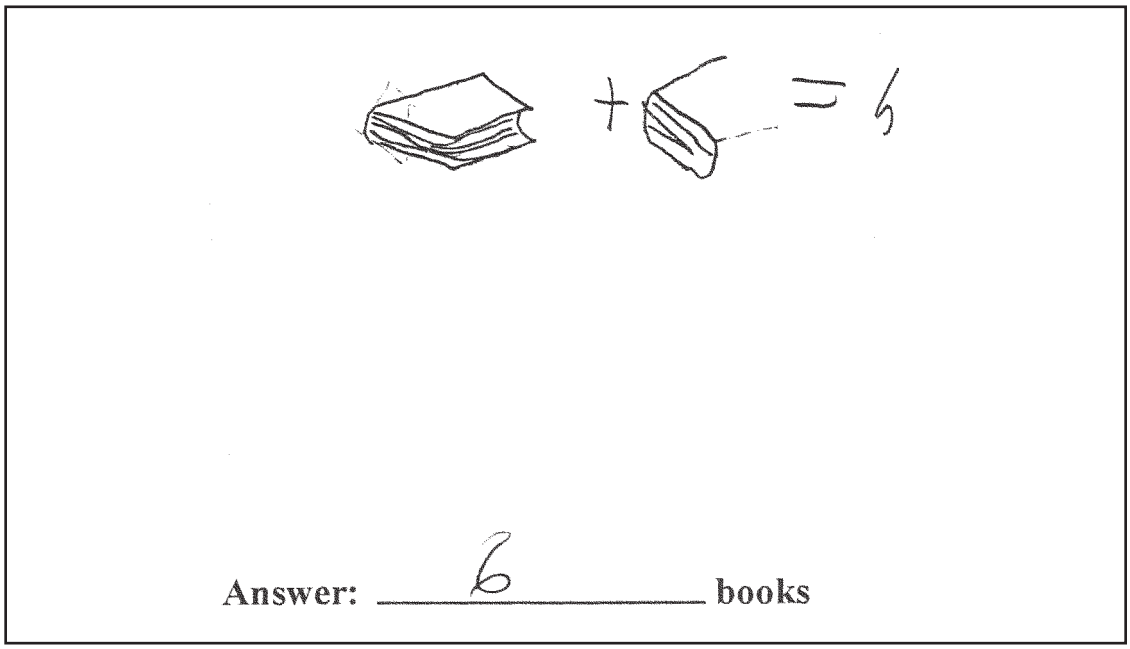
Annotation for score point: 2

All parts are correct:

1. Correct answer of 6 is provided.
2. All work is shown that demonstrates complete understanding of using statistical information in a display.

Item #6 **Response Score: 1**

Short Constructed Response:



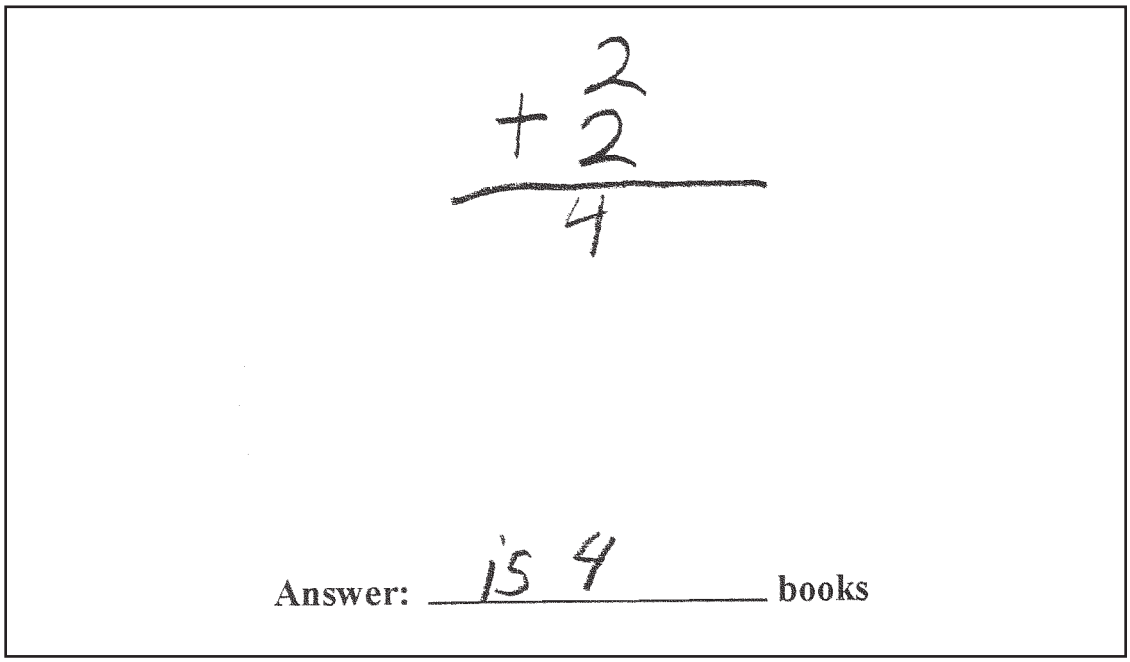
Annotation for score point: 1

Some part is correct:

1. Correct answer of 6 is provided.
2. All work is *not* shown. No indication that half a  is equal to 2 books and that 4 + 2 = 6.

Item #6 **Response Score: 0**

Short Constructed Response:



Annotation for score point: 0

No part is correct:

1. *Incorrect* answer of 4 is provided.
2. No correct work is shown. (2 + 2 is not accounted for. Two half books are not shown in the statistical display [pictograph] for Sheila if in fact that is what the student is referring to.)

7. C
8. B
9. C
10. A
11. A

This problem is worth 4 points.

12. Tonika wrote the number pattern below.

60, 55, 50, 45, ___, ___

A. In the spaces above, write the next 2 numbers in Tonika's pattern.

B. On the lines below, write the rule for Tonika's number pattern.

_____

_____

_____

C. On the lines below, tell why the number 24 will not be in Tonika's pattern.

_____

_____

_____

12. Extended Constructed Response

Score	Rubric
4	4 of 4 parts correct
3	3 of 4 parts correct
2	2 of 4 parts correct
1	1 of 4 parts correct OR Some correct and relevant work or explanation
0	Response is totally incorrect or irrelevant

- 1 point for one correct number in pattern in part A
- 1 point for second correct number in pattern in part A
- 1 point for correct rule in part B
- 1 point for correct explanation in part C

Problem Solution:

A. **40, 35** (error can be carried through to second number).

B. Tonika subtracts (e.g., takes away, minuses) 5 each time OR equivalent (may see "skip-counted by 5s backwards" or "down by 5s").

C. 24 is not a multiple of 5 OR 24 does not end in a 0 or a 5 OR equivalent (may see pattern continued: 30, 25, *not 24*, 20).

Item #12 **Response Score: 4**

Extended Constructed Response:

Part A

60, 55, 50, 45, 40, 35

Part B

Start with a multiple of five, then count by fives downward.

Part C

Because it is not a multiple of five.

Annotation for score point: 4

All parts are correct:

1. The pattern is successfully completed in Part A ("40, 35").
2. The correct rule for the pattern ("count by fives downward") is provided in Part B.
3. A correct explanation for why 24 can not be in the pattern ("it is not a multiple of five") is provided in Part C.

Item #12 Response Score: 3

Extended Constructed Response:

Part A

60, 55, 50, 45, 40, 35

Part B

The rule is – 5.

Part C

because it is not a 35 or 30.

Annotation for score point: 3

Most parts are correct:

1. The pattern is successfully completed in Part A ("40, 35").
2. The correct rule for the pattern (" – 5") is provided in Part B.
3. An *insufficient* explanation ("it is not a 35 or 30") is provided in Part C. Student needed to go further to "it is not a 25 or 20" as that would have excluded the 24 which lies in between.

Item #12 **Response Score: 2**

Extended Constructed Response:

Part A

60, 55, 50, 45, 35, 30

Part B

She did byss back words

Part C

Because 24 is not in the 5s.

Annotation for score point: 2

Some parts are correct:

1. The pattern is *partially* completed in Part A. (35 is incorrect, but 35 – 5 is 30 which follows the rule. An error has been successfully carried through.)
2. The correct rule for the pattern ("by 5's backwards") is provided in Part B.
3. An *incomplete* explanation in Part C. Student needed to be more mathematically precise by making it clearer that 24 is not a *multiple* of 5 (i.e., 24 is not in the fives time *table*).

Item #12 **Response Score: 1**

Extended Constructed Response:

Part A

60, 55, 50, 45, ___, ___

Part B

Part C

Annotation for score point: 1

Some part is correct:

1. The pattern is not completed in Part A (no attempt).
2. The correct rule for the pattern ("counting backwards pattern 5's") is provided in Part B.
3. An *incorrect* explanation in Part C.

Item #12 **Response Score: 0**

Extended Constructed Response:

Part A

60, 55, 50, 45, ___, ___

Part B

Part C

Annotation for score point: 0

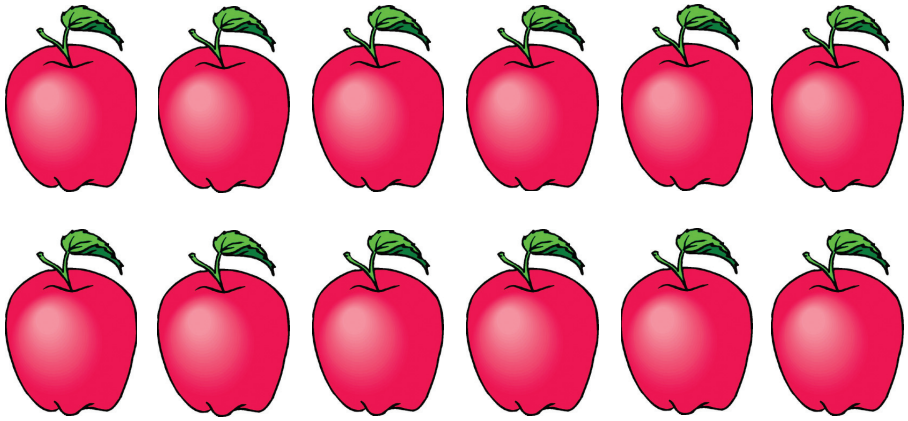
No parts are correct:

1. The pattern is not completed in Part A (no attempt).
2. No rule for pattern is provided in Part B (repeat given information only).
3. An *incorrect* explanation in Part C.

13. B
14. A
15. D
16. D
17. A

This problem is worth 2 points.

18. Henry has 12 apples.



He wants to give the same number of apples to each of his 4 friends.

Henry gives all 12 apples to his friends. How many apples will each friend get? Show all of your work and write your answer in the box below.

Answer: _____ **apples**

18. Short Constructed Response

Score	Rubric
2	2 of 2 parts correct
1	1 of 2 parts correct OR Some correct or relevant work or explanation
0	Response is totally incorrect or irrelevant

- 1 point for correct answer
- 1 point for correct work or explanation

Problem Solution:

- **3** (apples)

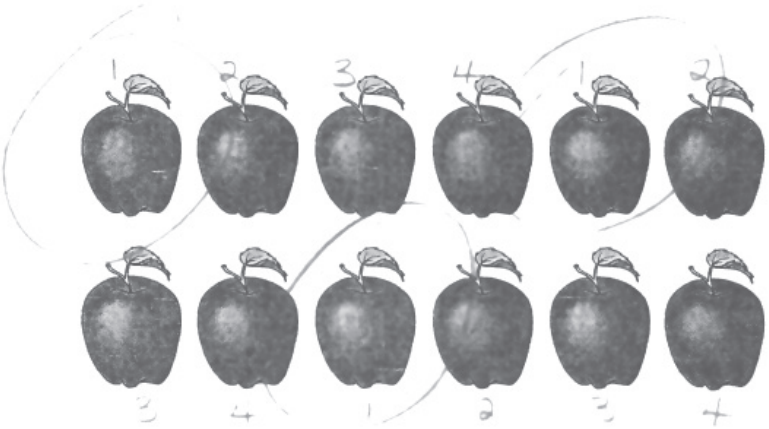
AND

- $12 \div 4 = 3$ OR may see groups of 4 apples circled to form 3 groups

Item #18 Response Score: 2 Short Constructed Response:

This problem is worth 2 points.

18. Henry has 12 apples.



He wants to give the same number of apples to each of his 4 friends.

Henry gives all 12 apples to his friends. How many apples will each friend get? Show all of your work and write your answer in the box below.

I counted 1, 2, 3, 4 and did it again and did it again. I saw how many first apples I had.

3

Answer: _____ **apples**

Annotation for score point: 2

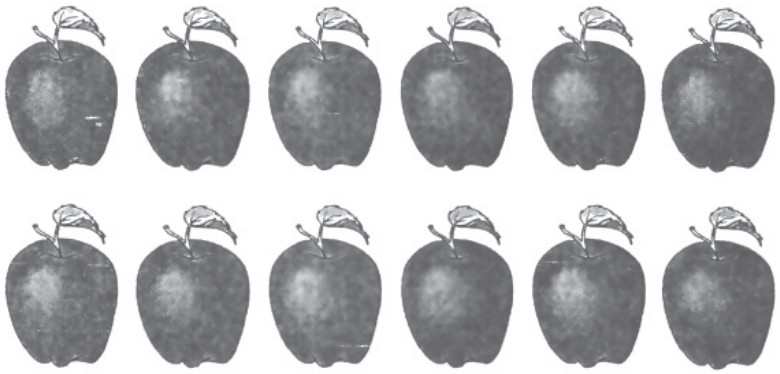
All parts are correct:

1. Correct answer of 3 is provided.
2. All work is shown that demonstrates understanding of using grouping or "sharing equally" to model division with whole numbers.

Item #18 Response Score: 1 Short Constructed Response:

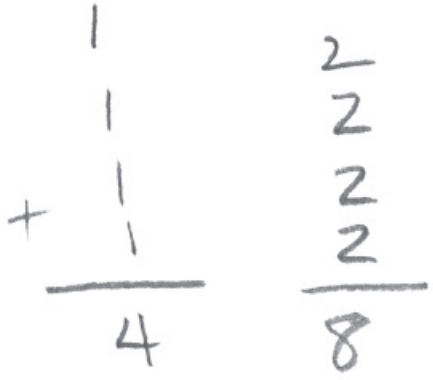
This problem is worth 2 points.

18. Henry has 12 apples.



He wants to give the same number of apples to each of his 4 friends.

Henry gives all 12 apples to his friends. How many apples will each friend get? Show all of your work and write your answer in the box below.



Annotation for score point: 1

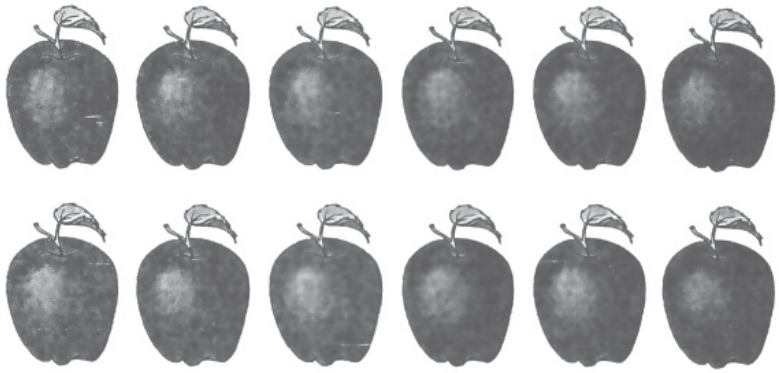
Some part is correct.

1. Correct answer of 3 is provided.
2. All work is *not* shown. No indication that 3 apples each does work. That is, 3 + 3 + 3 + 3 = 12 (equivalent to 12 ÷ 4).

Item #18 Response Score: 0 Short Constructed Response:

This problem is worth 2 points.

18. Henry has 12 apples.



He wants to give the same number of apples to each of his 4 friends.

Henry gives all 12 apples to his friends. How many apples will each friend get? Show all of your work and write your answer in the box below.

12
12
12
+12
48

Henry gives apples to each friends.

Annotation for score point: 0

No part is correct:

1. Incorrect answer of 48 is provided.
2. No correct work is shown.

Answer: 48 **apples**

19. C
20. A
21. B
22. D
23. C
24. B
25. A
26. D
27. B
28. C
29. B
30. C
31. D

SECTION II: Grade 3 Mathematics Test Map

MATHEMATICS		
Sequence	**GLE**	**Key**
1	N-2	D
2	MEA-3	B
3	E&C-2	C
4	G-6	D
5	F&R-1	C
6	S&P-2	Short Constructed Response
7	N-3	C
8	MEA-5	B
9	N-5	C
10	F&R-4	A
11	S&P-1	A
12	F&R-1	Extended Constructed Response
13	MEA-8	B
14	G-2	A
15	S&P-5	D
16	E&C-4	D
17	G-3	A
18	E&C-6	Short Constructed Response
19	MEA-2	C
20	F&R-4	A
21	G-5	B
22	F&R-5	D
23	S&P-2	C
24	MEA-7	B
25	N-1	A
26	G-1	D
27	S&P-1	B
28	E&C-1	C
29	N-9	B
30	S&P-3	C
31	E&C-5	D

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