

Student Name: _____



Mathematics Test Booklet Grade 5

Paper-Based Item Sampler

Alaska Department of Education & Early Development



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**DO NOT
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Part 1

Mathematics

Now you will be taking the mathematics portion of the Performance Evaluation for Alaska's Schools. This test has two parts that contain different types of questions. Record all your answers in your answer document only. Do not write your answers in the test booklet.

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Answer 23 is shown here.	Answer $\frac{1}{2}$ is shown here.	Answer .75 is shown here.

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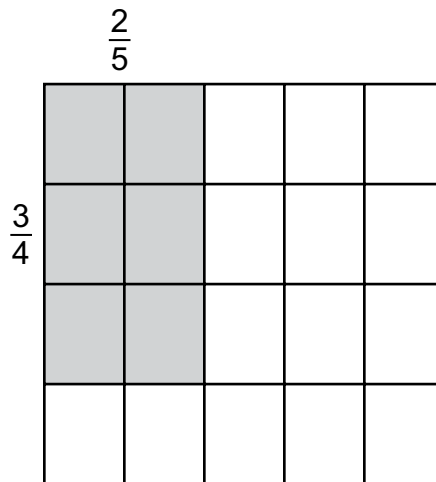
Mathematics – Grade 5 Part 1

Make sure you have marked all your answers in your answer document clearly and that you have completely erased any marks you do not want. When you are finished, close your test booklet and answer document. Then raise your hand.

1. Which expression is equivalent to $\frac{7}{8}$?

- A. 7×8
- B. $7 + 8$
- C. $7 - 8$
- D. $7 \div 8$

2. Use the array to multiply $\frac{3}{4}$ by $\frac{2}{5}$.



- A. $\frac{5}{9}$
- B. $\frac{3}{10}$
- C. $\frac{14}{20}$
- D. $\frac{23}{20}$

3. The rules for two number patterns are described.

Pattern x: Start with 4 and add 3 each time.

Pattern y: Start with 0 and add 5 each time.

Which ordered pair (x, y) shows corresponding terms from the two patterns?

- A. (3, 5)
- B. (4, 3)
- C. (7, 0)
- D. (7, 5)

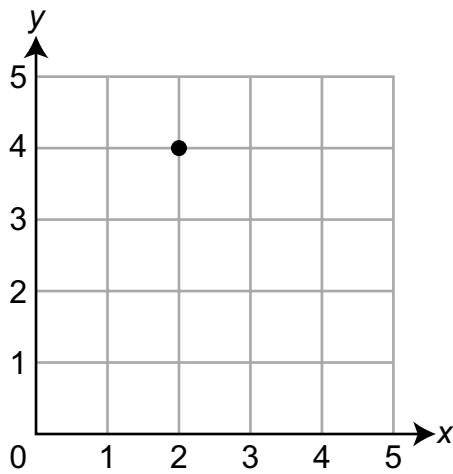
4. Divide.

$$162 \div 9$$

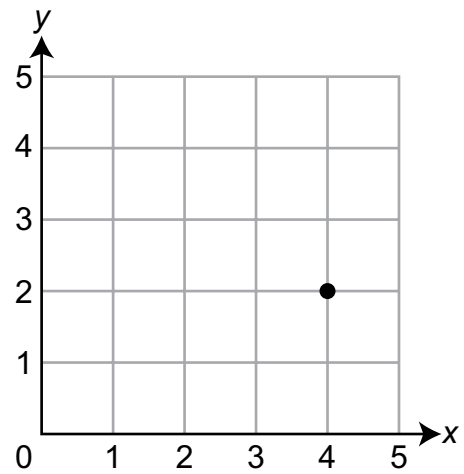
- A. 13
- B. 18
- C. 22
- D. 27

5. Sam is graphing the point $(2, 4)$ on a coordinate grid. Which coordinate grid shows this point graphed correctly?

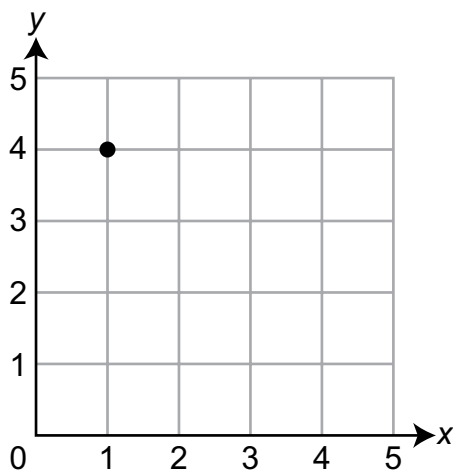
A.



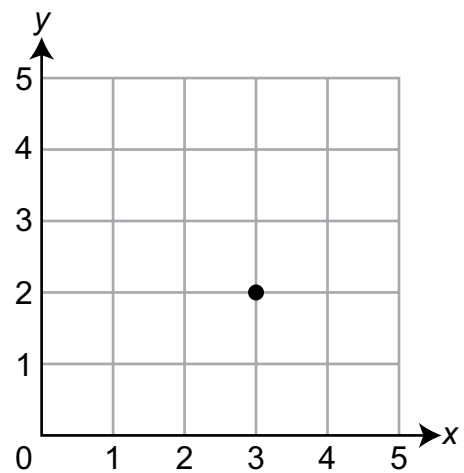
B.



C.



D.



Mathematics – Grade 5 Part 1

6. Victoria works for several days building a path. At the end of day 1 she has completed over half of the path, but she is not finished. Which fraction could represent the amount of the path she completed on day 1?
- A. $\frac{8}{9}$
 - B. $\frac{1}{2}$
 - C. $\frac{1}{10}$
 - D. $\frac{2}{5}$
7. Bruce walks a mile every day for exercise. Today he has walked 4,135 feet. How many more feet does he need to walk today to reach a mile?
- A. 1,045
 - B. 1,145
 - C. 1,155
 - D. 4,135
8. Mila's town has a population of 12,284 people. Which statement correctly compares the value of the 2 in the hundreds place to the value of the 2 in the thousands place?
- A. The value of the 2 in the hundreds place is 10 times the value of the 2 in the thousands place.
 - B. The value of the 2 in the hundreds place is $\frac{1}{10}$ the value of the 2 in the thousands place.
 - C. The value of the 2 in the thousands place is the same as the value of the 2 in the hundreds place.
 - D. The value of the 2 in the thousands place is less than the value of the 2 in the hundreds place.

Part 2

Mathematics

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Mathematics – Grade 5 Part 2

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9. Ms. Jones tells her class to write down the problem “subtract 3 from 9, then multiply by 7.” Which number sentence matches Ms. Jones’s problem?
- A. $3 - 9 \times 7$
 - B. $9 \times 7 - 3$
 - C. $9 - (3 \times 7)$
 - D. $(9 - 3) \times 7$
10. Hayden has a tile with four sides and four right angles. He says his tile is a rectangle. What other shape could describe Hayden’s tile?
- A. hexagon
 - B. square
 - C. pentagon
 - D. right triangle
11. Mr. Wilson is making punch for a party. The recipe calls for 2 pints of juice. He has already added 1 cup of juice. How many more **cups** of juice does he need to add to the punch?
- A. 1
 - B. 2
 - C. 3
 - D. 4

12. Which number is greater than the value of $3 \times \frac{2}{3}$?

A. $\frac{1}{3}$

B. 1

C. $\frac{4}{3}$

D. 3

13. Select ALL the expressions that are equivalent to 2.

A. $\frac{1}{2} + \frac{3}{4} + \frac{2}{3}$

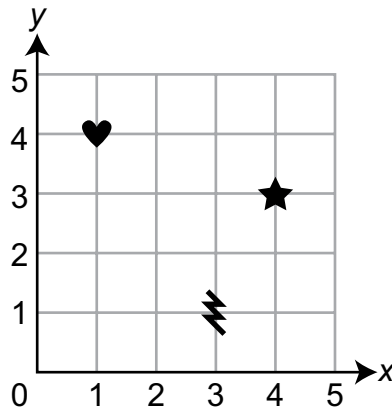
B. $\frac{3}{2} + \frac{4}{3}$

C. $\frac{10}{7} + \frac{6}{7} - \frac{2}{7}$

D. $\frac{12}{5} - \frac{2}{3}$

E. $\frac{5}{3} + \frac{2}{3} - \frac{1}{3}$

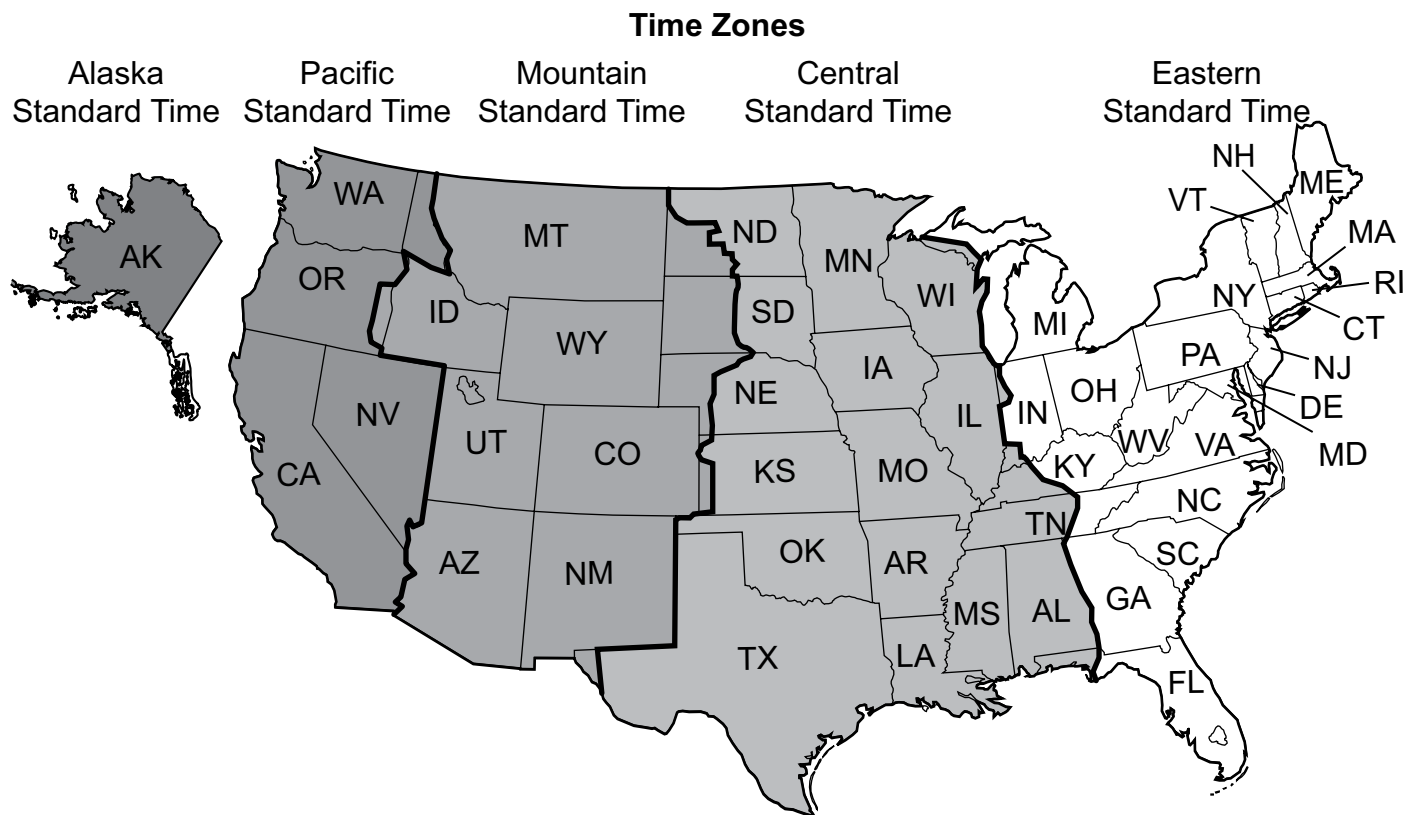
14. Andie created a grid with symbols.



Select ALL the ordered pairs that match the locations of the three symbols on Andie's grid.

- A. (1, 3)
- B. (1, 4)
- C. (3, 1)
- D. (3, 4)
- E. (4, 1)
- F. (4, 3)

15. Jeremy and Anne both live in the United States. They live in different time zones, and they do not live in Alaska or Hawaii. Jeremy calls Anne at 11:40 A.M. in Jeremy's time zone. Anne answers Jeremy's call at 2:40 P.M. in Anne's time zone.



Select ALL the time zones in which Jeremy and Anne could live.

- A. Alaska Standard Time
- B. Pacific Standard Time
- C. Mountain Standard Time
- D. Central Standard Time
- E. Eastern Standard Time

16. A serving size of cereal is $\frac{1}{4}$ cup. There are 4 cups of cereal in a box. How many servings of cereal are in the box?

Enter your answer in the gridded response area on the answer document.

17. Multiply.

$$42 \times 27$$

Enter your answer in the gridded response area on the answer document.



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