1. Which expression is equivalent to $4z + 5 + 3z$?

   A. $7z + 5$

   B. $8z + 4$

   C. $9z + 5$

   D. $12z$

2. Subtract.

   $\frac{1}{8} - \frac{3}{4}$

   A. $-\frac{5}{8}$

   B. $-\frac{2}{4}$

   C. $\frac{5}{8}$

   D. $\frac{2}{4}$

3. The population of Rock Valley is increasing by 4% each year. The current population is represented by p. The expression $1.04p$ represents the population next year.

   Which expression also represents the population of Rock Valley next year?

   A. $p + 0.04$

   B. $p \times 0.04$

   C. $p \times 1.04p$

   D. $p + 0.04p$

Go on to the next page.

4. Multiply.

   –2.1(6.3)

   A. –1.89

   B. –13.23

   C. –18.9

   D. –132.3

5. Select ALL fractions that are equivalent to $\frac{-4}{9}$.

   A. $-(\frac{4}{9})$

   B. $\frac{4}{-9}$

   C. $\frac{-4}{-9}$

   D. $-\frac{-4}{9}$

   E. $\frac{4}{9}$

   F. $-\frac{4}{-9}$

STOP.

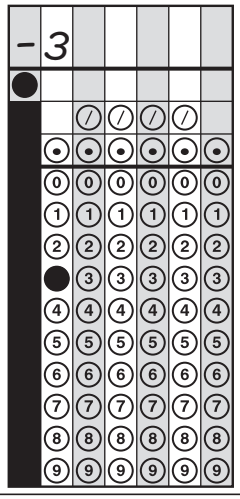
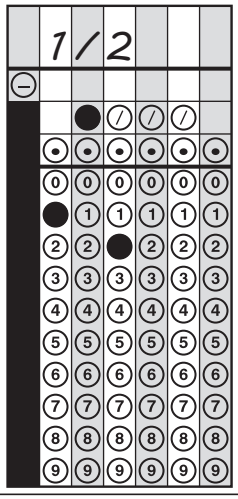
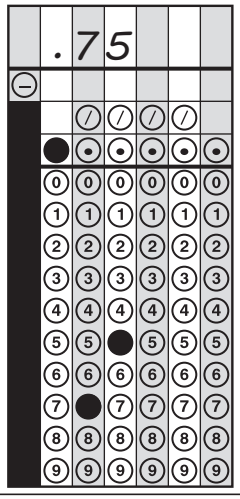
Part 2

Mathematics

Directions: 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 the answer document. Do not write in the test booklet.

Today, you will take Part 2 of the assessment. Calculators are allowed in this part. The test will include questions that will ask you to provide your answer in a variety of ways.

- Most of the questions will have four answer choices and only one correct answer.
- Some questions have more than four answer choices and more than one correct answer. You will be asked to identify all the correct answers.
- Some questions will ask you to fill in your answer to provide your response. To fill in your answer, write your answer in the boxes at the top of the grid. Only one number or symbol is allowed in each box. Write mixed numbers as improper fractions. You may start anywhere. Fill in the bubble that matches the number or symbol at the top. See the examples in the pictures.

Answer –3 is shown here.	Answer ½ is shown here.	Answer .75 is shown here.
		

Write your answers in the answer document. DO NOT WRITE YOUR ANSWERS IN THE TEST BOOKLET. All questions will be scored from answers in your answer document ONLY.

When you come to the word STOP at the end of Part 2, you have finished Part 2 of the mathematics assessment. You may review only Part 2 to check your answers. Make sure you have marked all your answers in the 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.

Go on to the next page.

6. Jay gets paid $30 a day plus $15 per driveway that he shovels that day. An expression for his daily earnings is $30 + 15d$, where d represents the number of driveways he shovels in a day. If he earned $90 in a day, how many driveways did he shovel that day?

   A. 3

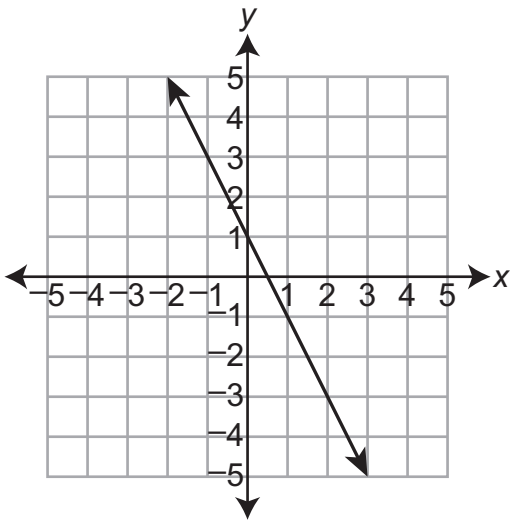
   B. 4

   C. 6

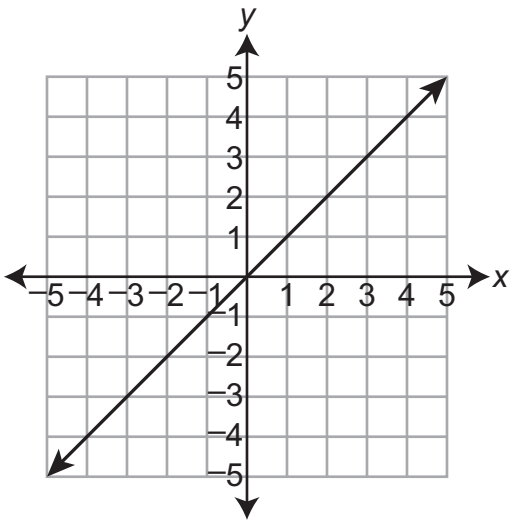
   D. 8

7. Which graph shows a proportional relationship?

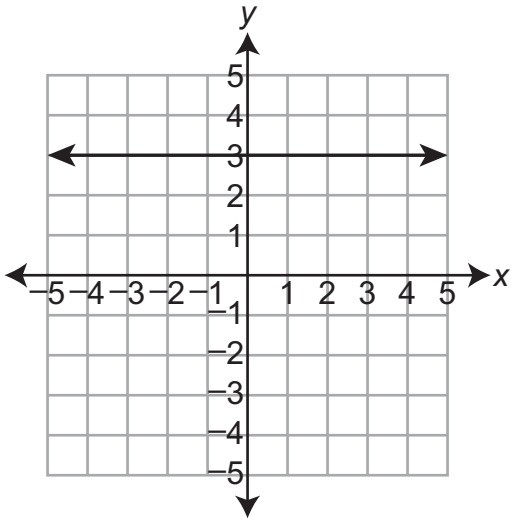
A.



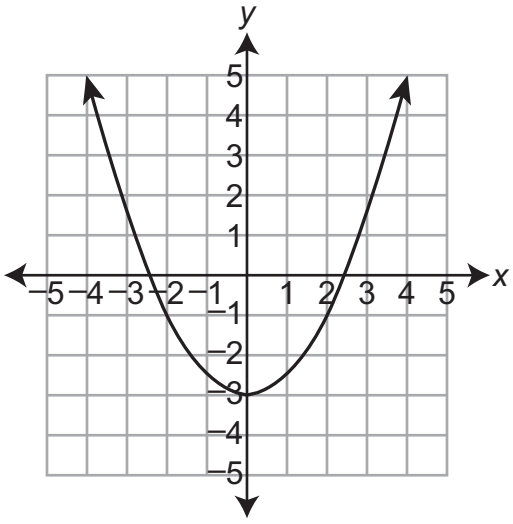
B.



C.



D.



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8. A stack of 4 math books is 6 inches high. How many math books are in a stack that is 24 inches high?

   A. 4

   B. 10

   C. 16

   D. 24

9. The probabilities of several events are listed.

   - The chance of a coin landing on heads is 0.50.
   - The chance of rain falling tomorrow is 60%.
   - The chance of rolling a 4 on a six-sided number cube is $\frac{1}{6}$.
   - The chance of rolling an even number on a six-sided number cube is $\frac{1}{2}$.

   Which event is most likely to occur?

   A. a coin landing on heads

   B. rain falling tomorrow

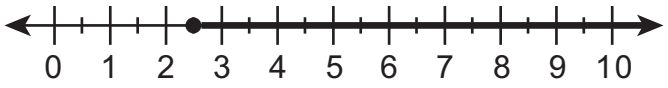
   C. rolling a 4 on a six-sided number cube

   D. rolling an even number on a six-sided number cube

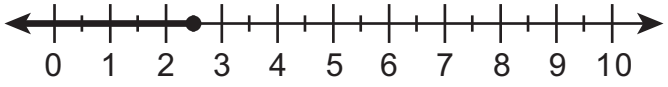
10. The water in a swimming pool has a depth of 28 inches. James adds water to the pool with a hose. The depth of the water increases at a rate of 8 inches per hour. James does not stop adding water until the depth of the water in the pool is at least 48 inches.

    Which graph shows the possible number of hours that could pass before James stops adding water to the pool?

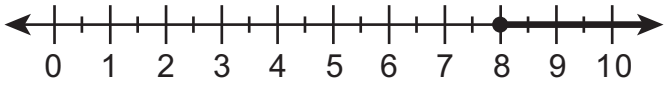
A.



B.



C.



D.

11. A circular tabletop has a diameter of 40 inches. What is the area, in square inches, of the circular tabletop?

    A. 40π

    B. 400π

    C. 800π

    D. $1{,}600\pi$

12. Geese are tagged and released in a wildlife area. Each year, about 60% of the tagged geese still live in the same wildlife area. There are an estimated 1,500 geese still living in the wildlife area this year.

    Based on the data, about how many tagged geese are expected to be living in the wildlife area next year?

    A. 600

    B. 900

    C. 1,200

    D. 1,500

13. Sandy made a scale drawing of a playground. She used the scale of 1 inch = 3 feet. If the length of the playground is 6 inches in Sandy's drawing, what is the actual length of the playground?

    A. 2 feet

    B. 3 feet

    C. 6 feet

    D. 18 feet

Go on to the next page.

14. Molly bought 2.4 pounds of mixed nuts for $19.57. What is the price per pound of mixed nuts?

    A. $0.12

    B. $8.15

    C. $46.97

    D. $17.17

15. Alex had an income of $7,000. He got 9% of his income from tips. How much of his income was not from tips?

    A. $630

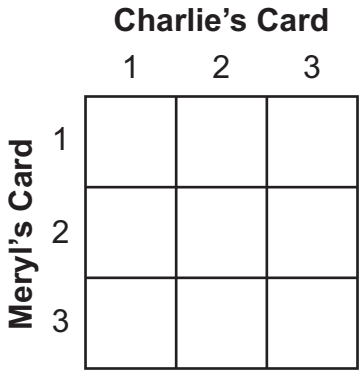
    B. $700

    C. $6,300

    D. $6,370

Go on to the next page.

16. Meryl and Charlie are playing a card game. Each has three cards, numbered 1, 2, and 3. They pick at the same time and each show a card. A probability diagram is shown.



Select ALL the options that show the probability that Meryl and Charlie both pick a card with the same number on it.

A. $\frac{1}{9}$

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

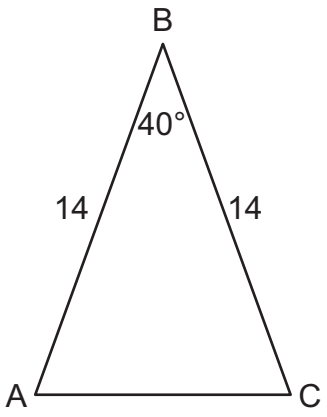
C. $\frac{3}{9}$

D. $\frac{2}{3}$

E. $\frac{8}{9}$

Go on to the next page.

17. Triangle ABC has two equal sides, as shown.



Angle B is 40 degrees, as marked. What is the measure, in degrees, of angle A?

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

STOP.

PEAKS
PERFORMANCE EVALUATION FOR ALASKA'S SCHOOLS

MATHEMATICS

Grade 7

The summary table below may be used with the grade 7 mathematics Paper-Based Item Sampler or Online Tools Training (OTT). It provides an answer key, alignment to the Alaska standards, and depth of knowledge level for each question.

Question #	Answer Key	Alignment with Standards	Depth of Knowledge
Part 1			
1	A	7.EE.A.1	2
2	A	7.NS.A.1	2
3	D	7.EE.A.2	2
4	B	7.NS.A.3	2
5	A, B	7.NS.A.2	2
Part 2			
6	B	7.EE.B.3	2
7	B	7.RP.A.2	2
8	C	7.EE.B.3	2
9	B	7.SP.C.5	2
10	A	7.EE.B.4	2
11	B	7.G.B.4	2
12	B	7.SP.A.1	2
13	D	7.RP.A.2	2
14	B	7.RP.A.1	2
15	D	7.RP.A.3	2
16	B, C	7.SP.C.7	2
17	70	7.G.A.2	2