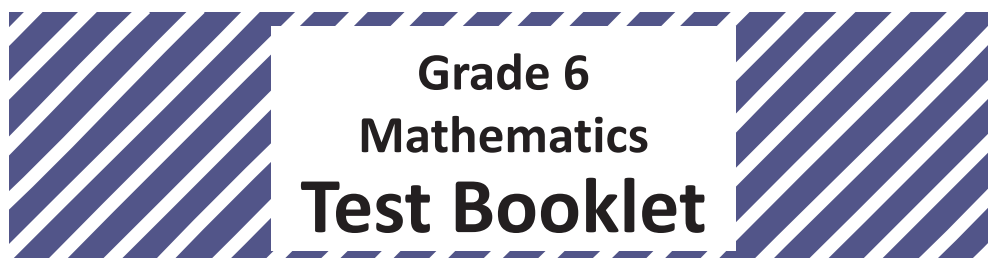
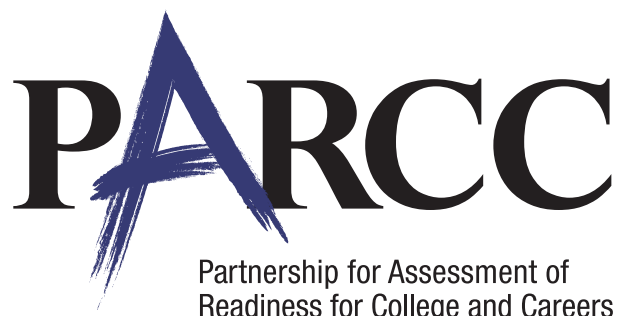


Student Name _____



Practice Test

TEST BOOKLET SECURITY BARCODE

Unit 1

(Non-Calculator)

Directions:

Today, you will take Unit 1 of the Grade 6 Mathematics Practice Test. You will not be able to use a calculator.

Read each question. Then, follow the directions to answer each question. Mark your answers by completely filling in the circles in your answer document. Do not make any pencil marks outside of the circles. If you need to change an answer, be sure to erase your first answer completely. If a question asks you to show or explain your work, you must do so to receive full credit. Only responses written within the provided space will be scored.

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Directions for Completing the Answer Grids

1. Work the problem and find an answer.
2. Write your answer in the boxes at the top of the grid.
3. Print only one number or symbol in each box. Do not leave a blank box in the middle of an answer.
4. Under each box, fill in the circle that matches the number or symbol you wrote above. Make a solid mark that completely fills the circle.
5. Do not fill in a circle under an unused box.
6. Fractions cannot be entered into an answer grid and will not be scored. Enter fractions as decimals.
7. See below for examples on how to correctly complete an answer grid.

EXAMPLES

To answer -3 in a question, fill in the answer grid as shown below.

-	3					
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
0	0	0	0	0	0	0
1	1	1	1	1	1	1
2	2	2	2	2	2	2
<input checked="" type="radio"/>	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

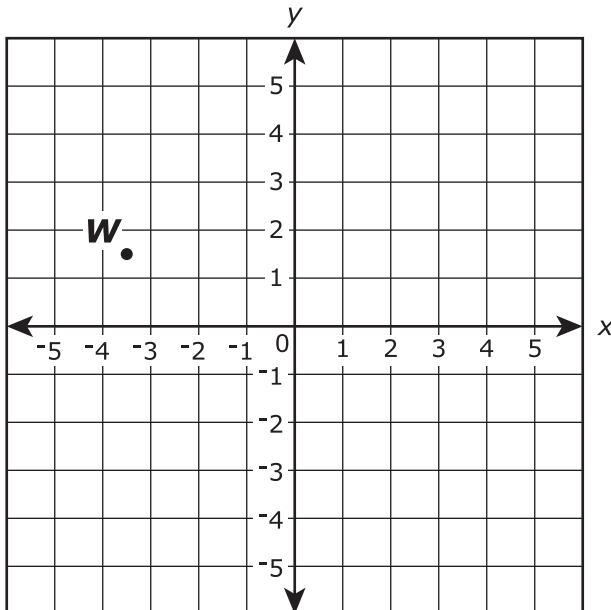
To answer $.75$ in a question, fill in the answer grid as shown below.

.	7	5				
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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1	1	1	1	1	1	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	<input checked="" type="radio"/>	5	5	5	5
6	6	6	6	6	6	6
7	<input checked="" type="radio"/>	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

1. A class of 25 students shares a class set of 100 markers. On a day with 5 students absent, which statement is true?
 - A. For every 5 students, there is 1 marker.
 - B. For every 4 students, there is 1 marker.
 - C. For each student, there are 4 markers.
 - D. For each student, there are 5 markers.

2. The area of a rectangular patio is $5\frac{5}{8}$ square yards, and its length is $1\frac{1}{2}$ yards. What is the patio's width, in yards?
 - A. $3\frac{3}{4}$
 - B. $4\frac{1}{8}$
 - C. $7\frac{1}{8}$
 - D. $8\frac{7}{16}$

3. This coordinate plane shows the location of point W .



What is the value of the x -coordinate of point W ? Enter your answer as a decimal to the nearest 0.5.

Enter your answer in the box.

4. Enter your answer in the box.

$$33.8 \div 32.5 =$$

5. Which equations with exponential expressions are true?

Select **all** that apply.

A. $3^3 = 3 \cdot 3$

B. $5^2 = 5 \cdot 5$

C. $5^4 = 4 \cdot 4 \cdot 4 \cdot 4$

D. $7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 = 6^7$

E. $7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 = 7^6$

F. $7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 = 7^7$

6. Enter your answer in the box.

$$34,992 \div 81 =$$

7. These five rational numbers are plotted on a horizontal number line.

$$-\frac{2}{3}, \frac{7}{8}, -\frac{4}{5}, \frac{7}{10}, -\frac{4}{3}$$

Which statement about the locations on the number line of the rational numbers is true?

A. $-\frac{2}{3}$ is farthest to the left, and $\frac{7}{8}$ is farthest to the right.

B. $-\frac{4}{3}$ is farthest to the left, and $\frac{7}{8}$ is farthest to the right.

C. $-\frac{2}{3}$ is farthest to the left, and $\frac{7}{10}$ is farthest to the right.

D. $-\frac{4}{3}$ is farthest to the left, and $\frac{7}{10}$ is farthest to the right.

8. What is the greatest common factor of 16 and 48?

Enter your answer in the box.

9. Select each expression that is equivalent to $3(n + 6)$.

Select **all** that apply.

A. $3n + 6$

B. $3n + 18$

C. $2n + 2 + n + 4$

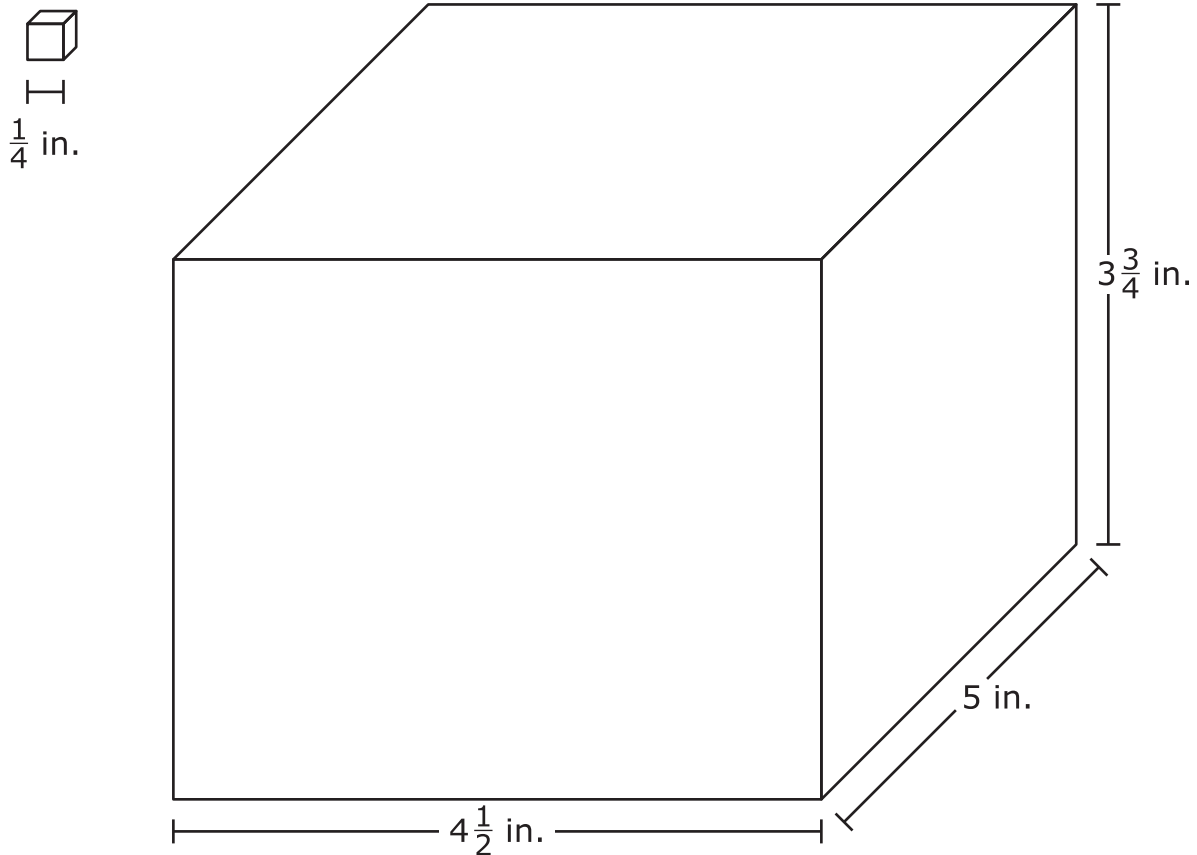
D. $2(n + 6) + (n + 6)$

E. $2(n + 6) + n$

10. What is the sum of 74.835 and 2.67?

Enter your answer in the box.

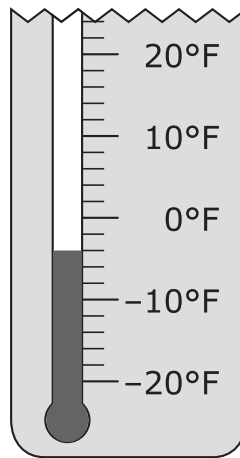
- 11.** Small cubes with edge lengths of $\frac{1}{4}$ inch will be packed into the right rectangular prism shown.



How many small cubes are needed to completely fill the right rectangular prism?

Enter your answer in the box.

- 12.** The picture shows part of a thermometer measuring temperature in degrees Fahrenheit.



What is the temperature, in degrees Fahrenheit, shown on the thermometer to the nearest integer?

Enter your integer answer in the box.

- 13.** Marshall took \$36.75 to a fair. Each ticket into the fair costs x dollars. Marshall bought 3 tickets. Which expression represents the amount of money, in dollars, that Marshall had after he bought the tickets?
- A.** $36.75 - (3 + x)$
- B.** $36.75x - 3$
- C.** $36.75(3) - x$
- D.** $36.75 - 3x$

14. Which question is a statistical question?

- A.** How tall is the oak tree?
- B.** How much did the tree grow in one year?
- C.** What are the heights of the oak trees in the schoolyard?
- D.** What is the difference in height between the oak tree and the pine tree?

15. Joanne buys a rectangular rug with an area of $\frac{35}{4}$ square meters. The length of the rug is $\frac{7}{2}$ meters.

What is the width, in meters, of the rug?

- A.** $\frac{5}{8}$
- B.** $\frac{7}{8}$
- C.** $\frac{5}{2}$
- D.** $\frac{7}{2}$

16. Thomas buys a case of bottled water. A case contains 36 bottles of water and costs \$4.69. Thomas will sell each bottle of water for \$0.75 at a school event.

How much profit, in dollars, will Thomas earn if he sells all the bottles of water?

Enter your answer in the box.

- 17.** Three values on a number line are labeled f , g , and h .

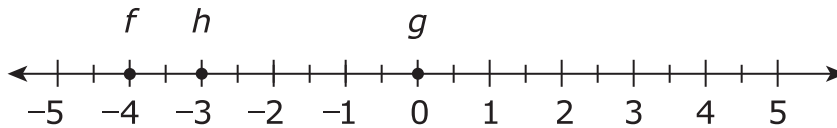
$$f = -4$$

$$g = -g$$

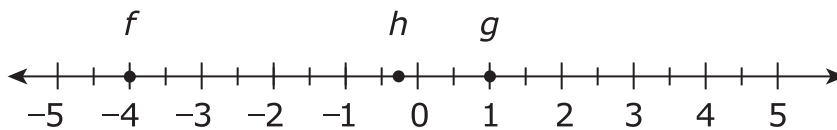
$$h = -f$$

Which number line correctly shows the values of f , g , and h ?

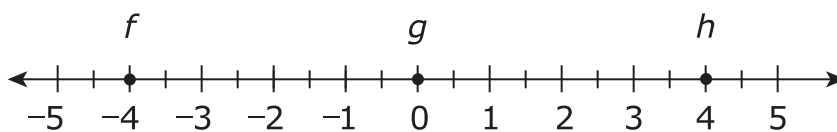
A.



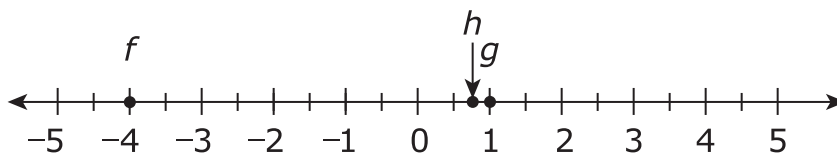
B.



C.



D.



- 18.** The median number of points scored by 9 players in a basketball game is 12. The range of the numbers of points scored by the same basketball players in the same game is 7.

Which statement is true based on the given information?

- A.** At least one player scored 12 points.
- B.** The greatest number of points scored is less than 19 points.
- C.** The mean number of points scored is greater than 12 points.
- D.** If the greatest number of points scored is 16, then the least number of points scored is 4.





You have come to the end of Unit 1 of the test.

- **Review your answers from Unit 1 only.**
- **Then, close your test booklet and answer document and raise your hand to turn in your test materials.**







Unit 2

(Calculator)

Directions:

Today, you will take Unit 2 of the Grade 6 Mathematics Practice Test. You will be able to use a calculator.

Read each question. Then, follow the directions to answer each question. Mark your answers by completely filling in the circles in your answer document. Do not make any pencil marks outside of the circles. If you need to change an answer, be sure to erase your first answer completely. If a question asks you to show or explain your work, you must do so to receive full credit. Only responses written within the provided space will be scored.

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Directions for Completing the Answer Grids

1. Work the problem and find an answer.
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EXAMPLES

To answer -3 in a question, fill in the answer grid as shown below.

-	3					
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	0	0	0	0	0	0
<input type="radio"/>	1	1	1	1	1	1
<input type="radio"/>	2	2	2	2	2	2
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<input type="radio"/>	7	7	7	7	7	7
<input type="radio"/>	8	8	8	8	8	8
<input type="radio"/>	9	9	9	9	9	9

To answer $.75$ in a question, fill in the answer grid as shown below.

.	7	5				
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	0	0	0	0	0	0
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<input type="radio"/>	4	4	4	4	4	4
<input type="radio"/>	5	5	<input checked="" type="radio"/>	5	5	5
<input type="radio"/>	6	6	6	6	6	6
<input type="radio"/>	7	<input checked="" type="radio"/>	7	7	7	7
<input type="radio"/>	8	8	8	8	8	8
<input type="radio"/>	9	9	9	9	9	9



19. Which expression represents “6 more than x ”?

A. $x - 6$

B. $6 \cdot x$

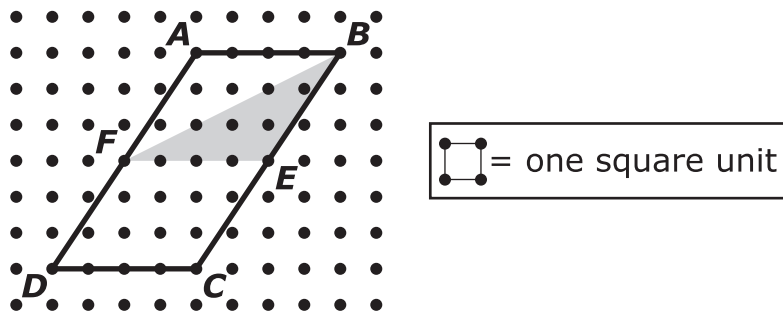
C. $x + 6$

D. $6 - x$



Use the information provided to answer Part A and Part B for question 20.

An advertising company is designing a new logo that consists of a shaded triangle inside a parallelogram.



20. Part A

What is the area, in square units, of parallelogram $ABCD$?

Enter your answer in the box.

Part B

In the new logo, what fraction of the parallelogram is shaded?

- A. $\frac{1}{12}$
- B. $\frac{1}{6}$
- C. $\frac{1}{4}$
- D. $\frac{1}{3}$



- 21.** Brianna's teacher asks her which of these three expressions are equivalent to each other.

Expression A: $9x - 3x - 4$

Expression B: $12x - 4$

Expression C: $5x + x - 4$

Brianna says that all three expressions are equivalent because the value of each one is -4 when $x = 0$.

Brianna's thinking is incorrect.

- Identify the error in Brianna's thinking.
- Determine which of the three expressions are equivalent.
- Explain or show your process in determining which expressions are equivalent.

Enter your answers and your explanation or process in the space provided.

- 22.** Let x represent any number in the set of even integers greater than 1.

Which inequality is true for all values of x ?

A. $x < 0$

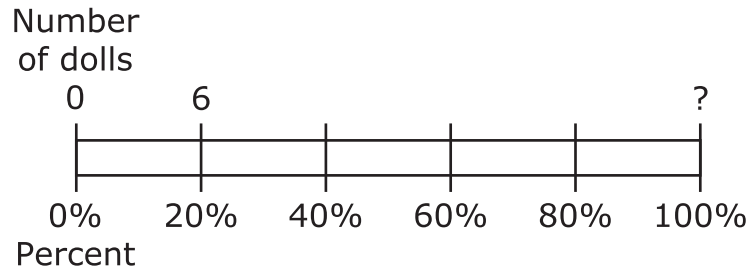
B. $x > 0$

C. $x < 4$

D. $x > 4$



- 23.** Anita brings 6 dolls to her grandma's house. These dolls represent 20% of Anita's doll collection, as shown in the diagram.



What is the total number of dolls in Anita's doll collection?

Enter your answer in the box.

- 24.** A company makes yellow golf balls and white golf balls. The table shows the company's sales of yellow golf balls for the last 3 years.

Yellow Golf Balls

Year	Number of Yellow Golf Balls Sold
1	204,132
2	225,624
3	237,108

- The company expects sales of yellow golf balls to continue to increase in year 4.
- The company also expects the ratio of yellow golf ball sales to white golf ball sales in year 4 to be about 1 : 5.
- The average selling price of a box of 12 yellow or 12 white golf balls is \$23.94.

Estimate the company's total sales, in dollars, of golf balls in year 4. Show all your work. Explain how you determined your estimate.

Enter your estimate, your work, and your explanation in the space provided.



- 25.** What is the value of $a^2 + 3b \div c - 2d$, when $a = 3$, $b = 8$, $c = 2$, and $d = 5$?

Enter your answer in the box.

Use the information provided to answer Part A through Part D for question 26.

Chad drove 168 miles in 3 hours.

26. Part A

How many miles per hour did Chad drive?

Enter your answer in the box.

Part B

Chad will drive 672 more miles. He continues to drive at the same rate.

How many hours will it take Chad to drive the 672 miles?

Enter your answer in the box.

Part C

Chad stopped and filled the car with 11 gallons of gas. He had driven 308 miles using the previous 11 gallons of gas.

How many miles per gallon did Chad's car get?

Enter your answer in the box.

Part D

Chad's car continues to get the same number of miles per gallon.

How many gallons of gas will Chad's car use to travel 672 miles?

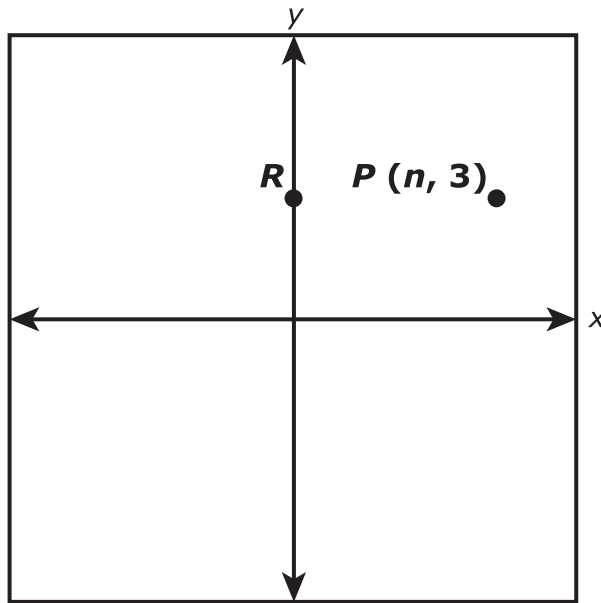
Enter your answer in the box.



27. There are 5,280 feet in 1 mile. How many inches are in 2 miles?

- A.** 10,560
- B.** 63,360
- C.** 126,720
- D.** 253,440

28. The graph shows the location of point P and point R . Point R is on the y -axis and has the same y -coordinate as point P .



Point Q is graphed at $(n, -2)$. The distance from point P to point Q is equal to the distance from point P to point R .

What is the distance from point P to point Q ? What is the value of n ? Explain how you determined the distance from point P to point Q , and the value of n .

Enter your answers and your explanations in the space provided.



Use the information provided to answer Part A and Part B for question 29.

The ratio of the sales tax to the amount of a purchase is a fixed number in Town Q. The table shows the sales tax for a purchase of \$1,200.

Town Q Tax

Purchase	Sales Tax
\$1,200	\$72
\$2,500	?
?	\$108

29. Part A

What is the sales tax for a purchase of \$2,500?

- A.** \$18.06
- B.** \$34.72
- C.** \$144.00
- D.** \$150.00

Part B

What is the cost of an item with a sales tax of \$108?

- A.** \$432
- B.** \$648
- C.** \$1,092
- D.** \$1,800





You have come to the end of Unit 2 of the test.

- **Review your answers from Unit 2 only.**
- **Then, close your test booklet and answer document and raise your hand to turn in your test materials.**





Unit 3

(Calculator)

Directions:

Today, you will take Unit 3 of the Grade 6 Mathematics Practice Test. You will be able to use a calculator.

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7. See below for examples on how to correctly complete an answer grid.

EXAMPLES

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-	3					
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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<input type="radio"/>	5	5	5	5	5	5
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<input type="radio"/>	7	7	7	7	7	7
<input type="radio"/>	8	8	8	8	8	8
<input type="radio"/>	9	9	9	9	9	9

To answer $.75$ in a question, fill in the answer grid as shown below.

.	7	5				
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	0	0	0	0	0	0
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<input type="radio"/>	6	6	6	6	6	6
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<input type="radio"/>	8	8	8	8	8	8
<input type="radio"/>	9	9	9	9	9	9



- 30.** During a sale, all pillows are $\frac{1}{4}$ off the regular price.

Which expression shows the amount of money saved on a pillow that had a regular price of d dollars?

A. $d \div 4$

B. $d \times 4$

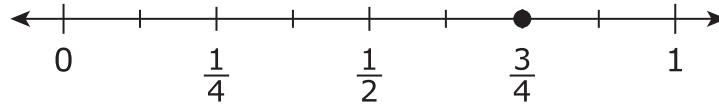
C. $d + 4$

D. $d - 4$



Use the information provided to answer Part A and Part B for question 31.

This diagram shows a number line.



31. Part A

James has a board that is $\frac{3}{4}$ foot long. He wants to cut the board into pieces that are each $\frac{1}{8}$ foot long.

How many pieces can James cut from the board? Explain how James can use the number line diagram to determine the number of pieces he can cut from the board.

Enter your answer and your explanation in the space provided.

Part B

Write an equation using division that represents how James can find the number of pieces he can cut from the board.

Enter your equation in the space provided.



Use the information provided to answer Part A and Part B for question 32.

Greg bought 4 notebooks for \$6.40.

32. Part A

Which equation can be used to determine the price, p , in dollars, of 1 notebook?

A. $\frac{p}{4} = 6.40$

B. $\frac{p}{6.40} = 4$

C. $4p = 6.40$

D. $6.40p = 4$

Part B

What is the price, in dollars, of 1 notebook?

Enter your answer in the box.

**33. Part A**

A group of hikers buys 8 bags of mixed nuts. Each bag contains $3\frac{1}{2}$ cups of mixed nuts. The mixed nuts are shared evenly among 12 hikers. How many cups of mixed nuts will each hiker receive? Show your work or explain your answer.

Enter your answer and your work or explanation in the space provided.

Part B

The hikers plan to visit a scenic lookout. They will rest after they hike 2 miles. Then they will hike the remaining $1\frac{3}{4}$ miles to the lookout. The trail the hikers will use to return from the lookout is $\frac{1}{2}$ mile shorter than the trail they will use to go to the lookout. Each hiker will bring $\frac{1}{4}$ gallon of water for each mile to and from the lookout.

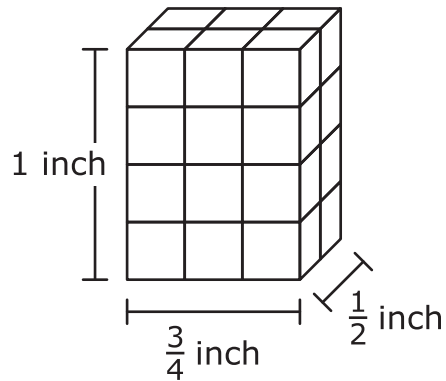
- Determine the total distance, in miles, each hiker will hike. Show your work or explain your answer.
- Determine the total number of gallons of water each hiker will bring. Show your work or explain your answer.

Enter your answers and your work or explanations in the space provided.



Use the information provided to answer Part A and Part B for question 34.

This right rectangular prism is built with small cubes.

**34. Part A**

What is the volume, in cubic inch(es), of the right rectangular prism?

- A. $\frac{3}{8}$
- B. $\frac{2}{3}$
- C. $1\frac{2}{3}$
- D. $2\frac{1}{4}$

**Part B**

What is the volume, in cubic inch(es), of 1 of the small cubes?

- A. $\frac{1}{64}$
- B. $\frac{1}{16}$
- C. $\frac{9}{16}$
- D. $\frac{3}{8}$

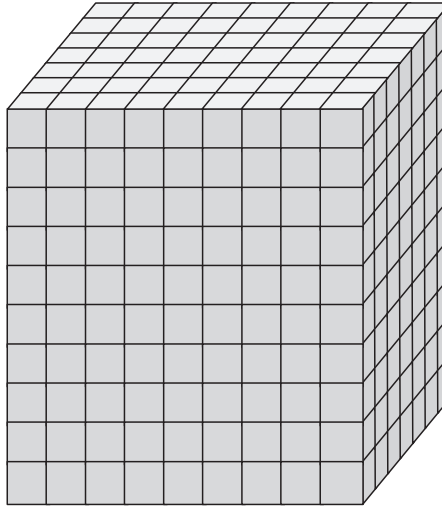


Use the information provided to answer Part A and Part B for question 35.

A student filled a right rectangular prism-shaped box with one inch cubes to find the volume, in cubic inches. The student's work is shown.

Box Filled with Cubes

Top layer →
(63 cubes)

**Student's Work**

- I packed my box full of cubes. Each cube has a volume of 1 cubic inch.
- I counted 63 cubes in the top layer.
- Since there are 9 layers of cubes below the top layer, I solved $63 \times 9 = 567$. So there are 567 cubes.
- The volume of my box is 567 cubic inches.

35. Part A

Explain why the student's reasoning is incorrect. Provide the correct volume, in cubic inches, of the box.

Enter your explanation and the correct volume in the space provided.

**Part B**

A second box also has a base area of 63 square inches, but it has a volume of 756 cubic inches.

What is the height, in inches, of the second box? Explain or show how you determined the height.

Enter the height and your explanation or work in the space provided.

Use the information provided to answer Part A and Part B for question 36.

The number of blueberry muffins that a baker makes each day is 40% of the total number of muffins she makes.

36. Part A

On Monday, the baker makes 36 blueberry muffins.

What is the total number of muffins that the baker makes on Monday?

Enter your answer in the box.

Part B

On Tuesday, the baker makes a total of 60 muffins.

How many blueberry muffins does the baker make on Tuesday?

Enter your answer in the box.



37. Sam's two new aquariums each hold exactly 200 gallons of water. One aquarium will hold small fish and the other will hold large fish. Now he needs new fish for his aquariums.

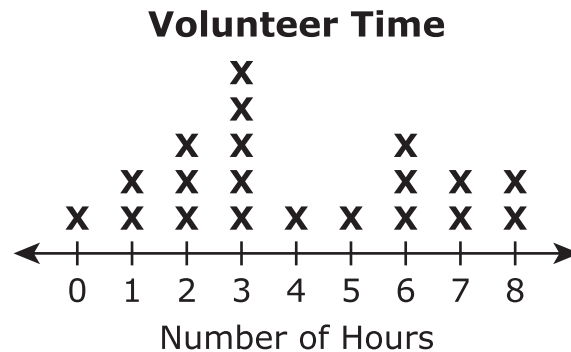
- He will buy 5 small fish for every 10 gallons of water in the aquarium.
- He will buy 8 large fish for every 40 gallons of water in the aquarium.

What is the total number of fish Sam will have? What will be the ratio of Sam's small fish to large fish? Show or explain the steps you used to solve this problem.

Enter your answers and your work or explanation in the space provided.

Use the information provided to answer Part A and Part B for question 38.

Janet surveyed a class of students. She recorded the number of hours that each student volunteered. This line plot shows the results of the survey.



38. Part A

How many students did Janet survey?

Enter your answer in the box.

Part B

What is the mean number of hours volunteered by the students in the survey?

Enter your answer in the box.





You have come to the end of Unit 3 of the test.

- **Review your answers from Unit 3 only.**
- **Then, close your test booklet and answer document and raise your hand to turn in your test materials.**





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