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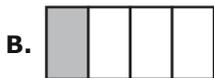
NC.6.RP.1

## 1st 9 Weeks Study Guide

1. Today in Mr. Lowe's art class, 14 students are wearing red. The remaining students are wearing either blue or white. There are 27 students in Mr. Lowe's class. Which statement is true?

- A. The ratio of total students in the class to students wearing red is 14 : 27.
- B. The ratio of students not wearing red to students wearing red is 13 to 14.
- C. For every 13 students wearing red, 14 students are wearing either blue or white.
- D. For every 14 students wearing red, 3 students are wearing white, and 10 students are wearing blue.

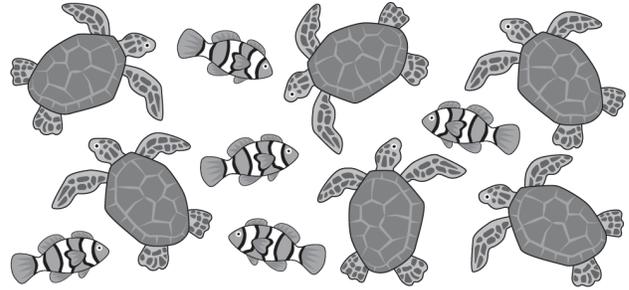
2. Which shows the ratio of unshaded parts to shaded parts as 3 : 4?



3. Marcus bought a dozen cherries. He ate four of them. Which shows the ratio of cherries eaten to cherries remaining?

- A. 4 : 8
- B. 4 : 12
- C. 8 to 4
- D. 8 to 12

4. Shelly sketches a picture of sea turtles and clown fish for a poster in science class.



Which shows the ratio of clown fish to sea turtles in Shelly's sketch?

- A. 6 to 5
- B. 5 to 6
- C. 6 : 11
- D. 5 : 11

5. The relationship between the numbers of daisies and gardenias in flower arrangements for a party is shown in the table.

<b>Daisies</b>	2	6	18
<b>Gardenias</b>	6	18	54

Which shows a pair of ratios that have the same multiplicative relationships as those given in the table?

- A. 1 : 3 and 24 : 6
- B. 21 : 7 and 4 : 14
- C. 12 : 8 and 15 : 45
- D. 3 : 9 and 15 : 5

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NC.6.RP.3

1. The cross country team runs a practice trail that is 2.5 kilometers long. The chart shows the number of times the team ran the trail last week.

Day	Number of Runs
Monday	3
Tuesday	2
Thursday	3

There are 1,000 meters in 1 kilometer. How many total **meters** did the cross country team run last week?

- A. 8 m
  - B. 2,000 m
  - C. 8,000 m
  - D. 20,000 m
2. A craft project requires 3 pints of paint for every two students. About how many **liters** of paint are needed for 60 students? [2.11 pints  $\approx$  1 liter]
- A. 30 L
  - B. 20 L
  - C. 43 L
  - D. 85 L

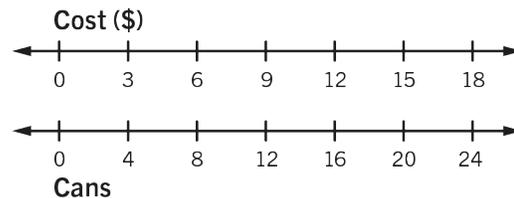
3. Evan walks his dog. The table shows the number of steps the dog takes for each of Evan's steps.

**Steps Comparison**

<b>Evan</b>	2	6	10	28	50
<b>Dog</b>	5	15	?	?	?

How many steps will the dog take if Evan walks 50 steps?

- A. 25 steps
  - B. 100 steps
  - C. 125 steps
  - D. 140 steps
4. The local grocery mart has cans of vegetables on sale. Julie's mom spends \$18 on 24 cans of vegetables.



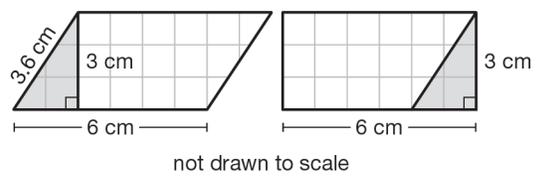
Todd's mom purchases 14 cans of vegetables at the same store. How much money does Todd's mom spend on vegetables?

- A. \$9.75
- B. \$10.50
- C. \$10.75
- D. \$11.25

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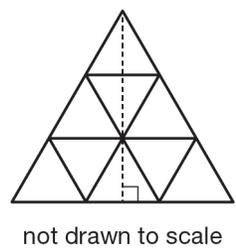
NC.6.G.1

1. Joey finds the area of a parallelogram by decomposing and rearranging the parts as shown.



Which equation can be used to find the area of the parallelogram?

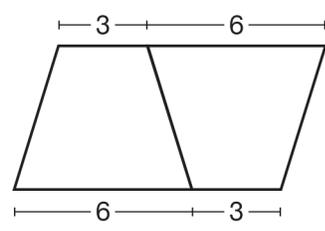
- A.  $6(3) = 18 \text{ cm}^2$
  - B.  $6(3.6) = 21.6 \text{ cm}^2$
  - C.  $6(3 + 3.6) = 39.6 \text{ cm}^2$
  - D.  $2(3.6) + 2(6) = 19.2 \text{ cm}^2$
2. Shania creates an art piece like the one shown using red and black paper.



The altitude of the piece measures 18 inches, and the base is 15.6 inches. Four of the nine congruent triangles use red paper. How many square inches of red paper does Shania use in her art piece?

- A.  $140.4 \text{ in}^2$
- B.  $124.8 \text{ in}^2$
- C.  $62.4 \text{ in}^2$
- D.  $46.8 \text{ in}^2$

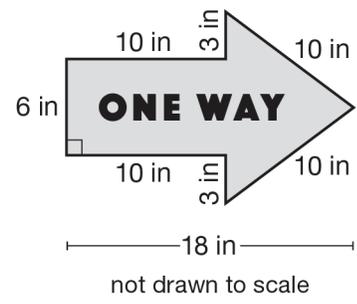
3. Lonell uses tiles in the shape of trapezoids to create a backsplash for the kitchen counter. Two tiles create the shape shown.



The height of the parallelogram created is 4 units. What is the area of each trapezoid?

- A.  $72 \text{ units}^2$
- B.  $36 \text{ units}^2$
- C.  $24 \text{ units}^2$
- D.  $18 \text{ units}^2$

4. Alisha paints a sign to hang in her room as shown.



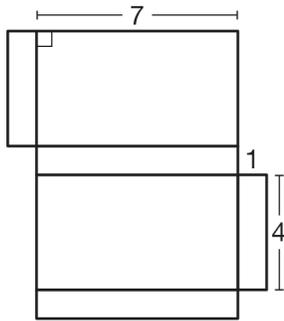
What is the area of the sign?

- A.  $52 \text{ in}^2$
- B.  $90 \text{ in}^2$
- C.  $108 \text{ in}^2$
- D.  $156 \text{ in}^2$

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NC.6.G.4

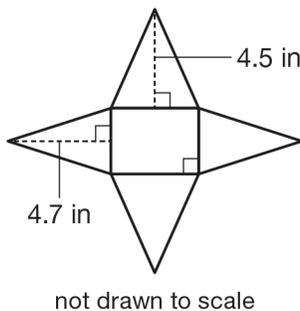
1. The net of a rectangular prism is shown.



Which is the surface area of the prism?

- A. 78 square units
- B. 71 square units
- C. 70 square units
- D. 48 square units

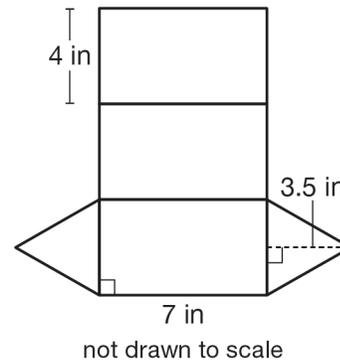
2. The net for a table decoration is shown.



The rectangular base measures 4 inches by 3 inches. What is the surface area of the table decoration?

- A.  $28.1 \text{ in}^2$
- B.  $32.1 \text{ in}^2$
- C.  $33.05 \text{ in}^2$
- D.  $44.1 \text{ in}^2$

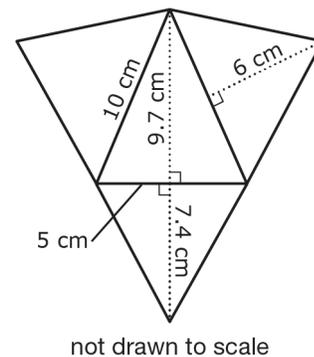
3. Cassie creates name plates for participants in a panel discussion. The net shows the pattern for the equilateral triangular prism used for each name plate.



Which expression can be used to determine the surface area of the name plate?

- A.  $(3)(7)(4) + \frac{1}{2}(4)(3.5)$
- B.  $(3)(7)(4) + \frac{1}{2}(4)(3.5)(2)$
- C.  $(2)(7)(4) + (7)(3.5) + \frac{1}{2}(4)(3.5)(2)$
- D.  $(7)(4) + (7)(3.5)(2) + \frac{1}{2}(4)(3.5)(2)$

4. The diagram shows the net of an isosceles triangular pyramid.



What is the surface area of the pyramid?

- A.  $72.75 \text{ cm}^2$
- B.  $102.75 \text{ cm}^2$
- C.  $205.5 \text{ cm}^2$
- D.  $21,534 \text{ cm}^2$

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NC.6.RP.2

1. A flower shop offers a special price on roses. The chart shows the costs for four different rose arrangements.

**Rose Arrangement**

Number of Roses	Cost
1 dozen	\$33.00
15	\$30.00
18	\$45.00
2 dozen	\$54.00

Which statement is true?

- A. The cost for one rose in the arrangement with 2 dozen roses is \$2.25.
  - B. The roses in the arrangement with 15 roses cost \$0.50 each.
  - C. Each rose costs \$0.40 if 18 roses are purchased.
  - D. One dozen roses has the lowest price per rose.
2. At an anniversary party, there were 2 gallons of homemade raspberry sherbet and 16 guests. There are 4 quarts in a gallon. How many quarts of sherbet could each guest receive?
- A.  $\frac{1}{4}$  quart per person
  - B.  $\frac{1}{2}$  quart per person
  - C. 2 quarts per person
  - D. 4 quarts per person

3. A hair salon has shampoo on sale this week. The chart shows the prices for different sizes of bottles.

**Shampoo Sale**

Bottle Size	Cost
8 ounces	\$5.60
16 ounces	\$8.00
24 ounces	\$11.52
48 ounces	\$28.80

Which size bottle offers shampoo at \$0.48 per ounce?

- A. 8-ounce bottle
  - B. 16-ounce bottle
  - C. 24-ounce bottle
  - D. 48-ounce bottle
4. The organic garden club prepares 18 rows for planting in 4 hours. How much time does it take the club to prepare 1 row for planting?
- A.  $\frac{2}{9}$  hour
  - B.  $\frac{1}{4}$  hour
  - C. 2 hours
  - D.  $2\frac{1}{2}$  hours
5. At Bingham Middle School, there are 380 sixth-grade students. There are a total of 19 teachers for sixth grade. Which of the following **best** represents a unit ratio for the situation?
- A. 2 students for each teacher
  - B.  $\frac{1}{20}$  teacher for each student
  - C.  $\frac{1}{2}$  teacher for each student
  - D. 200 students for each teacher

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NC.6.NS.4

1. What is the missing common factor that makes the equation true?

$$45 + 75 = \underline{\hspace{2cm}} (3 + 5)$$

- A. 5
- B. 11
- C. 15
- D. 120

2. Blake wrote the following expression for the prime factorization of 513:

$$3 \cdot 3 \cdot 57$$

Which statement is true about the expression Blake wrote?

- A. Blake's expression is incorrect because it is not equivalent to 513.
- B. Blake's expression is correct because both 3 and 57 are prime numbers.
- C. Blake's expression is incorrect because 57 is not a prime number.
- D. Blake's expression is correct because it is equivalent to 513.

3. Which of the following fractions would have a least common denominator of 12 when paired with  $\frac{3}{4}$ ?

- A.  $\frac{1}{2}$
- B.  $\frac{1}{4}$
- C.  $\frac{5}{6}$
- D.  $\frac{5}{8}$

4. Edmund and Olivia find the least common multiple of 3 and 6. Edmund says that the correct answer is 6. Olivia says the correct answer is 3. Which statement **best** describes the students' answers?

- A. Both students are incorrect because the least common multiple of 3 and 6 is 12.
- B. Both students are correct because 3 and 6 are common multiples of 3 and 6.
- C. Edmund is correct because the least common multiple of 3 and 6 is 6.
- D. Olivia is correct because the greatest common factor of 3 and 6 is 3.

5. To make fruit baskets to take to local nursing homes, the culinary club purchases 36 green apples and 63 pears. What is the largest number of baskets the club can make so that each type of fruit is divided equally among the baskets?

- A. 18 baskets
- B. 9 baskets
- C. 7 baskets
- D. 6 baskets