

Name: \_\_\_\_\_

Class/Period: \_\_\_\_\_

Assignment: Homework #22 Due 4/29

Teacher: Fletcher

- 1 A store sells cans of tomatoes priced as shown.

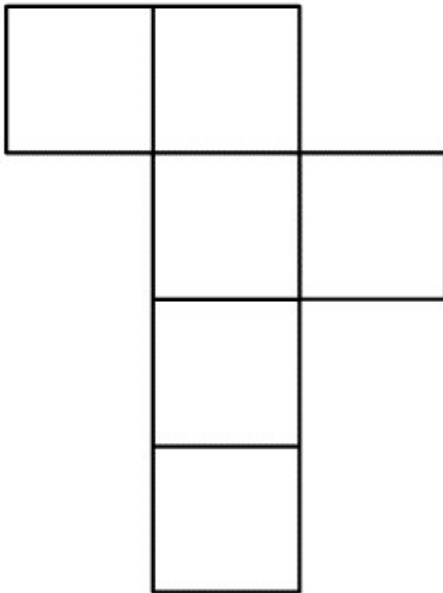
**Canned Tomatoes**

| Size      | Cost   |
|-----------|--------|
| 10 ounces | \$0.89 |
| 15 ounces | \$1.29 |
| 18 ounces | \$2.26 |
| 32 ounces | \$3.39 |

Which size can of tomatoes has the lowest cost per ounce?

- 1 10 ounces
- 2 15 ounces
- 3 18 ounces
- 4 32 ounces

- 2 Karen has a cube that has a side length of 6 in. The net of the cube is shown.



What is the surface area of the cube?

- 1 36 square inches
- 2 144 square inches
- 3 180 square inches
- 4 216 square inches

3 Sarah earns \$400 per week and spends 15% of her earnings on transportation. How much does Sarah spend on transportation every week?

- 1 \$80
- 2 \$75
- 3 \$60
- 4 \$55

4 A set of stickers contains 4 hearts for every 6 stars. Which choice contains an equivalent ratio of hearts to stars?

- 1 6 hearts to 9 stars
- 2 2 hearts to 4 stars
- 3 1 heart to 3 stars
- 4 8 hearts to 10 stars

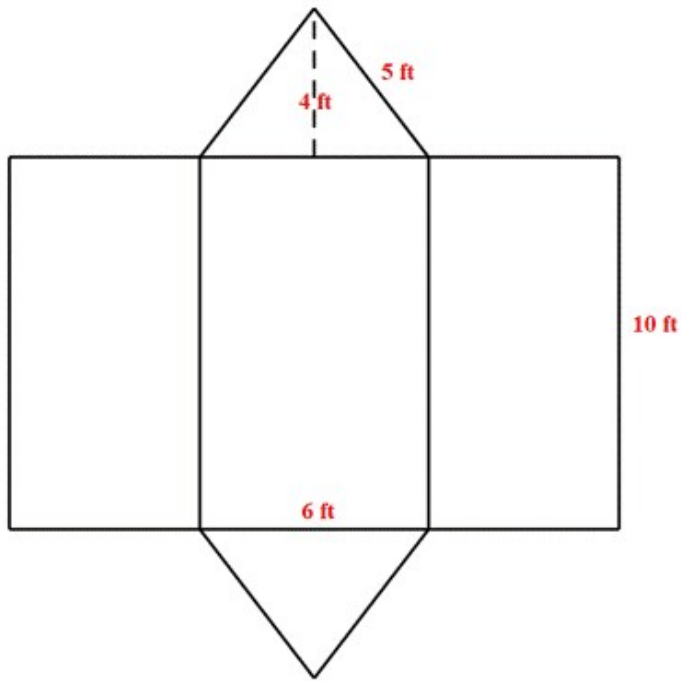
5 In the table, the ratio of  $y$  to  $x$  is constant.

| $x$ | $y$ |
|-----|-----|
| 2   | 5   |
| 4   | 10  |
| 10  | ?   |
| 18  | 45  |

What is the value of the missing number?

- 1 15
- 2 20
- 3 25
- 4 30

- 6 A net of a three-dimensional figure is shown.



What is the surface area of the three-dimensional figure?

- 1  $184 \text{ ft}^2$
  - 2  $180 \text{ ft}^2$
  - 3  $150 \text{ ft}^2$
  - 4  $125 \text{ ft}^2$
- 7 Tonya pays \$300 each month to rent an office where she earns \$25 per hour tutoring students. Which equation represents Tonya's profit,  $y$ , for working  $x$  hours?
- 1  $y = 25 + 300x$
  - 2  $y = 25x + 300$
  - 3  $y = 25 - 300x$
  - 4  $y = 25x - 300$

- 8 A machine fills boxes at a constant rate. At the end of 35 minutes, it has filled 5 boxes. Which table represents the relationship between the number of minutes the machine fills boxes and the number of boxes it has filled?

**FILLING BOXES**

1

| Time (Minutes) | Boxes Filled |
|----------------|--------------|
| 7              | 1            |
| 14             | 2            |
| 21             | 3            |
| 28             | 4            |

**FILLING BOXES**

3

| Time (Minutes) | Boxes Filled |
|----------------|--------------|
| 1              | 7            |
| 2              | 14           |
| 3              | 21           |
| 4              | 28           |

**FILLING BOXES**

2

| Time (Minutes) | Boxes Filled |
|----------------|--------------|
| 5              | 1            |
| 10             | 2            |
| 15             | 3            |
| 20             | 4            |

**FILLING BOXES**

4

| Time (Minutes) | Boxes Filled |
|----------------|--------------|
| 1              | 5            |
| 2              | 10           |
| 3              | 15           |
| 4              | 20           |

9 The ratio of passengers to lifeboats on three cruise ships is 20 to 1. Which table shows the correct ratio for each ship?

1

| Ship | # of Passengers | # of Lifeboats |
|------|-----------------|----------------|
| 1    | 2000            | 200            |
| 2    | 3000            | 300            |
| 3    | 4000            | 400            |

2

| Ship | # of Passengers | # of Lifeboats |
|------|-----------------|----------------|
| 1    | 2000            | 100            |
| 2    | 3000            | 150            |
| 3    | 4000            | 200            |

3

| Ship | # of Passengers | # of Lifeboats |
|------|-----------------|----------------|
| 1    | 100             | 2000           |
| 2    | 150             | 3000           |
| 3    | 200             | 4000           |

4

| Ship | # of Passengers | # of Lifeboats |
|------|-----------------|----------------|
| 1    | 1000            | 200            |
| 2    | 2000            | 400            |
| 3    | 3000            | 600            |

- 10 Before leaving math class, students were instructed to select a pair of cards from a deck that represented the same situation. Four students pairs are shown below:

**Student 1:**

$$y = 3x + 50$$

A student went trick or treating and received 50 pieces of candy.  
He decided that he would eat 3 per day.

**Student 2:**

$$b = 10w + 60$$

A student received 60 dollars for a birthday gift.  
He decided that he put the \$60 into a savings account.  
Then, he decides to deposit \$10 each week.

**Student 3:**

$$t = 20s$$

A student is studying for final exams.  
She decides she will answer 20 questions each time she stays after school with her teacher to study.

**Student 4:**

$$q = 0.25d$$

A student is selling a collection of seashells at a yard sale.  
Each seashell is being sold for 25 cents.

Which student did not find a pair of cards that represent the same situation?

- 1 Student 1
- 2 Student 2
- 3 Student 3
- 4 Student 4

11 You are playing a matching game in math class. To make a match, the expressions on each card must be equivalent expressions.

Match 1:

$$2x + x + 3x$$

$$5x$$

Match 2:

$$6y + 3y + y$$

$$10y$$

Match 3:

$$3t^3$$

$$t \cdot t \cdot 3t$$

Match 4:

$$24n^3$$

$$2n \cdot 2n \cdot 6n$$

Which match is incorrect?

- 1 1
- 2 2
- 3 3
- 4 4