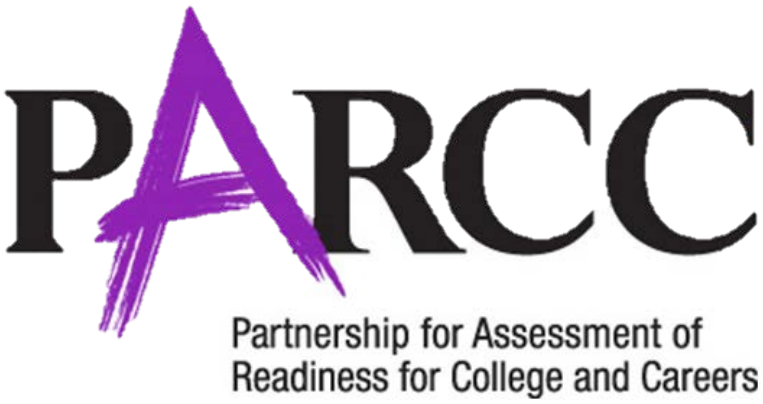


Math

Spring 2018

Grade 4

Released Items

1. **0651-M05057**

Students from different classes painted a picture on a wall in the school office. On Monday, Class M painted $\frac{5}{10}$ of the wall, and Class S painted $\frac{30}{100}$ of the wall.

Part A

Complete the equation to show the total amount of the wall painted by Class M and Class S.

Drag and drop a number into each box.

$$\frac{\square}{100} + \frac{\square}{100} = \frac{\square}{\square}$$

30	35	50	80	95	100	200

Part B

Class P painted the remaining $\frac{2}{10}$ of the wall. What fraction of the wall was painted by Class P and Class S altogether?

Enter your answer in the space provided. Enter **only** your answer.

2. 0083-M00453

Part A

A parking garage has a total of 87 parking spaces. If there are 3 levels in the garage, and each level has an equal number of parking spaces, how many parking spaces are on each level?

Enter your answer in the box.

Part B

The parking garage will add 2 new levels of parking spaces. Each new level will have twice the number of parking spaces as the old levels. How many parking spaces in all will be on these 2 new levels?

Enter your answer in the box.

Part C

After the 2 new levels of parking spaces are complete, the garage will gain 98 new customers. The garage will then have a total of 171 customers.

- Write an equation to find the number of customers the garage had before the 2 new levels were added. Use the letter *c* to stand for the unknown number in your equation.
- How many customers did the garage have before the 2 new levels were added?
- About how many empty parking spaces will the garage have after the 2 new levels are completed and all its customers have parking spaces? Round your answer to the nearest ten. Explain your thinking using numbers and/or words.

Enter your equation, your answers, and your explanation in the space provided.

Math symbols

+ − × ÷

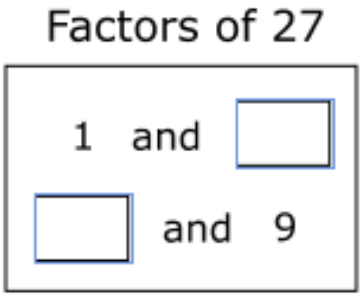
= < > ≠

$ ° ?

3. **M04089**

Complete the factor pairs for 27.

Drag and drop a number into each box.



3	4	18
26	27	36

4. **M00975P**

Which pair of fractions is equivalent?

- A. $\frac{3}{4}$ and $\frac{7}{8}$
- B. $\frac{5}{4}$ and $\frac{9}{8}$
- C. $\frac{8}{10}$ and $\frac{4}{6}$
- D. $\frac{8}{12}$ and $\frac{4}{6}$

5. **M03184P**

Two pairs of numbers are shown. The symbol needed to compare the two numbers is missing from each box.

$572,897 \square 500,000 + 70,000 + 2,000 + 800 + 90 + 7$

$610,201 \square$ six hundred one thousand two hundred ten

Which two symbols should be placed into the boxes to correctly compare the two pairs of numbers?

- A. $<$, $=$
- B. $=$, $=$
- C. $=$, $>$
- D. $<$, $>$

6. **M03547**

Which expressions can be placed in the box to make a true equation?

$$\square = 120$$

Select the **three** correct answers.

- A. $10 \times 3 \times 4$
- B. 40×30
- C. $20 + 20 + 80$
- D. $60 \times 2 \times 10$
- E. $40 + 50 + 30$

7. **0566-M02519**

Part A

Caleb mixed red water and blue water to make purple water. He poured $\frac{2}{8}$ of a cup of red water into a jar. After he poured the blue water into the jar, there was a total of $\frac{5}{8}$ of a cup of purple water in the jar. How much blue water did Caleb pour into the jar?

- A. $\frac{3}{8}$ of a cup
- B. $\frac{7}{8}$ of a cup
- C. $\frac{3}{16}$ of a cup
- D. $\frac{7}{16}$ of a cup

Part B

Caleb mixed red water and yellow water to make $\frac{65}{100}$ of a liter of orange water. He then spilled some of the orange water and had $\frac{27}{100}$ of a liter left. How much orange water did Caleb spill?

- A. $\frac{27}{100}$ of a liter
- B. $\frac{38}{100}$ of a liter
- C. $\frac{48}{100}$ of a liter
- D. $\frac{92}{100}$ of a liter

8. **M01450**

Which expression represents a total distance of $\frac{3}{10}$ of a meter?

- A. $\frac{10}{10}\text{meter} + \frac{3}{10}\text{meter}$
- B. $\frac{10}{10}\text{meter} - \frac{3}{10}\text{meter}$
- C. $\frac{1}{10}\text{meter} + \frac{1}{10}\text{meter} + \frac{1}{10}\text{meter}$
- D. $\frac{3}{10}\text{meter} + \frac{3}{10}\text{meter} + \frac{3}{10}\text{meter}$

9. **M04106**

What is 1,962 divided by 5?

Enter your answer in the space provided. Enter **only** your answer.

Remainder:

10. **M01045P**

Justin and Diego are playing a game. Their scores are shown.

JUSTIN	DIEGO
8,000 points	800 points

Which statement correctly compares their scores?

A. Diego's score is 10 times Justin's score.

B. Diego's score is 100 times Justin's score.

C. Justin's score is 10 times Diego's score.

D. Justin's score is 100 times Diego's score.

11. **VH101371**

Enter your answer in the box.

$5{,}296 - 3{,}488 =$ ☐

12. **M03351**

A serving of carrots is $\frac{3}{4}$ cup. How many cups are in 7 servings of carrots?

Enter your answer as a fraction or mixed number in the space provided. Enter **only** your answer.

13. **0564-M02515**

There is a stack of empty bowls. The bowls are the same size. Each of 7 students puts blueberries into a bowl. The table shows the fraction of a bowl filled by each student.

Name	Fraction of a Bowl
Franco	$\frac{2}{6}$
Gina	$\frac{2}{4}$
Hank	$\frac{3}{5}$
Isabella	$\frac{6}{8}$
Julian	$\frac{5}{10}$
Karen	$\frac{4}{12}$
Lawrence	$\frac{25}{100}$

(continues on next page)

Part A

Which students have smaller amounts of blueberries in their bowls than Julian?

Select the **three** correct answers.

- [ ] A. Franco
- [ ] B. Gina
- [ ] C. Hank
- [ ] D. Isabella
- [ ] E. Karen
- [ ] F. Lawrence

Part B

Which fraction comparison is correct?

- ○ A. $\frac{4}{12} > \frac{2}{6}$
- ○ B. $\frac{5}{10} < \frac{3}{5}$
- ○ C. $\frac{2}{4} = \frac{6}{8}$
- ○ D. $\frac{25}{100} > \frac{3}{5}$

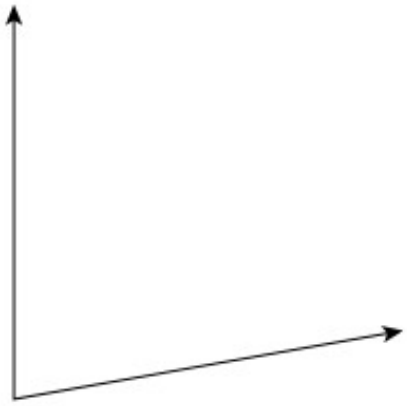
14. **M03313**

Jason, John, Kendra, and Dana ate one full pizza altogether. Jason ate $\frac{3}{12}$ of the pizza, and John and Kendra each ate $\frac{2}{12}$ of the pizza. How much pizza did Dana eat?

Enter your answer in the space provided. Enter **only** your answer.

15. **VH144641**

Use the protractor to find the measure, in degrees, of the angle.



Enter your answer in the box.

16. **M00124**

Drag and drop the symbol into the box to compare the two numbers.

1.32 ☐ 1.29

17. **M02472**

A shopper bought a T-shirt on sale for $8. The shopper also bought a pair of jeans. The jeans cost 6 times as much as the T-shirt. How much money did the pair of jeans cost in dollars?

A. $14

B. $42

C. $48

D. $56

18. **4010-M03038**

A school band is selling 150 concert tickets for $2 each.

- There are 2 groups of students selling tickets.
- Each group has 4 students in it.

The band teacher gives each of the students an equal number of tickets to sell so that there is the least number of tickets left over.

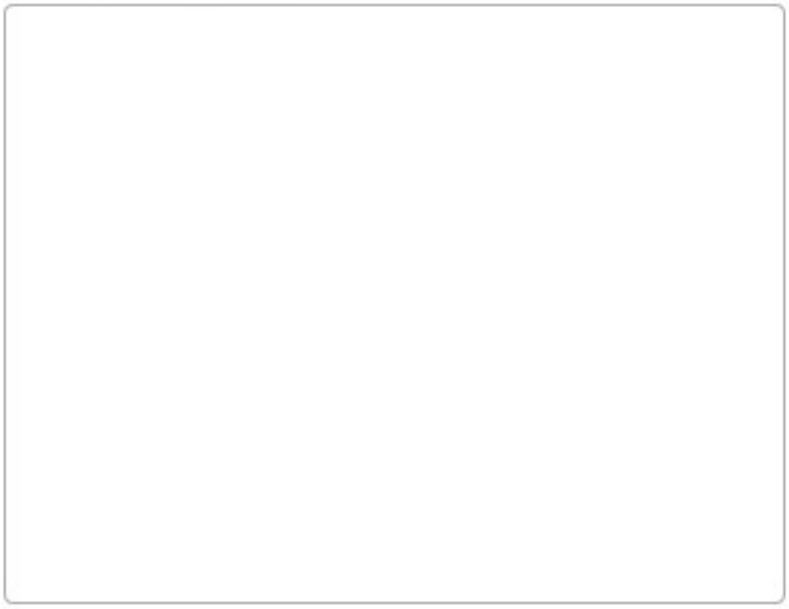
(continues on next page)

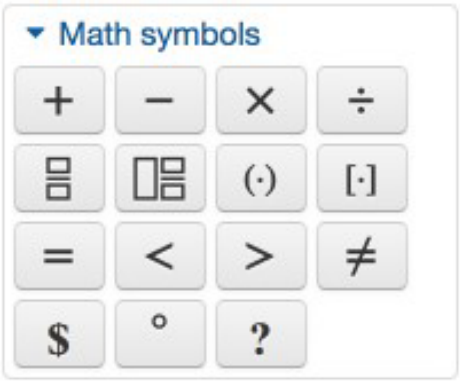
Part A

The band teacher buys all the leftover tickets that were not given to the students for $2 each.

How much money did the band teacher spend buying the leftover tickets? Show or explain all your work.

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





Part B

The students sold all the tickets given to them. Which equation shows how to find the amount of money, in dollars, made from the students selling the tickets they were given?

- A. $144 \times 2 \div 8 = 36$
- B. $18 \times 8 = 144$
- C. $18 \times 8 \div 2 = 72$
- D. $18 \times 8 \times 2 = 288$

19. **0415-M02051**

Part A

The place value of each digit of a number is shown in the table.

Place value	Digit
ones	2
tens	4
hundreds	2
thousands	4

Once the number is written in standard form, it can be divided evenly by which numbers?

Select the **two** correct answers.

- [ ] A. 4
- [ ] B. 6
- [ ] C. 7
- [ ] D. 8
- [ ] E. 9

Part B

The values of the two numbers shown in written form are added together.

$$5 \text{ hundreds} + 1 \text{ ten} + 0 \text{ ones}$$
$$7 \text{ hundreds} + 2 \text{ tens} + 6 \text{ ones}$$

The sum is then divided by 4. What is the new value?

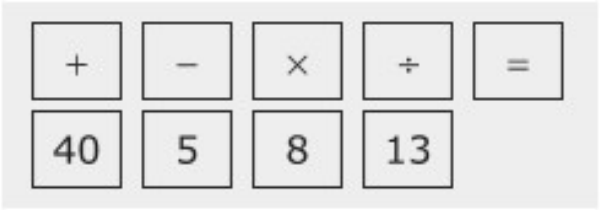
- ○ A. 314
- ○ B. 309
- ○ C. 34
- ○ D. 39

20. **M03194**

Build an equation to model the statement shown.

40 pounds is 5 times as heavy as 8 pounds.

Drag and drop each correct number and each correct symbol into the appropriate box.



21. **M00235**

Lindsey is making curtains, pillows, and placemats. The chart shows how many yards of fabric are needed for each item.

Craft Projects

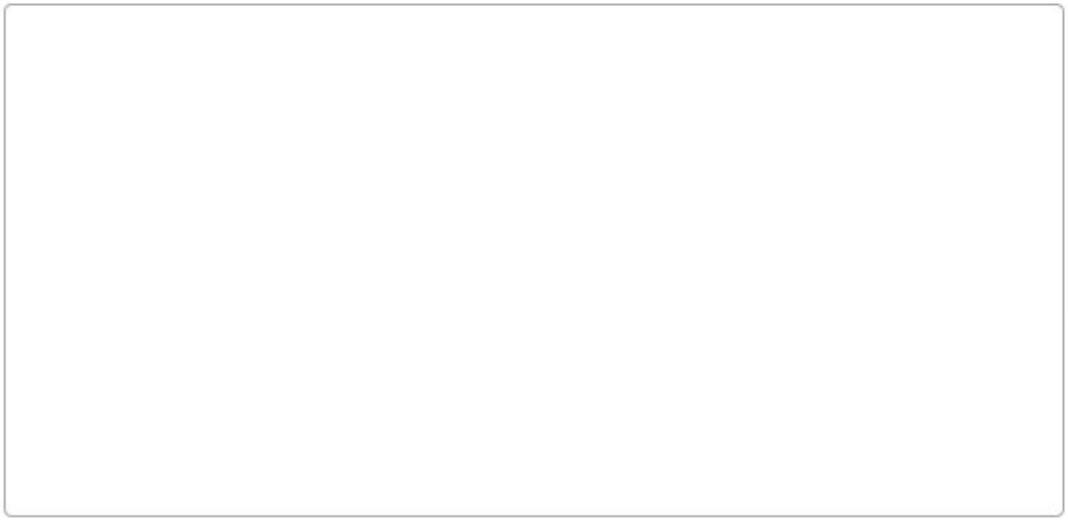
Item	Fabric Needed (yards)
curtains	6
pillows	3
placemats	2

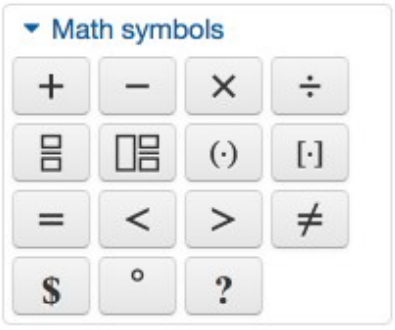
Lindsey started with a total of 27 yards of fabric, and then she made 2 of each item.

Use the chart to find two different ways Lindsey can use the remaining fabric to make more items. Determine the amount of fabric, if any, that will remain after she makes the extra items.

Explain your thinking that supports each of the different ways Lindsey can use the remaining fabric. Show your work.

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





22. **M03747P**

What is the value of this expression?

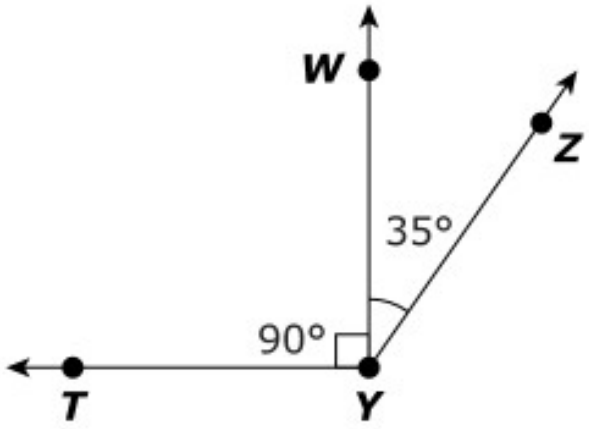
$$4{,}337 + 7{,}846$$

- A. 3,509
- B. 3,511
- C. 11,173
- D. 12,183

23. **4187-M03930**

Part A

The figure shows angle *TYZ*.



What is the measure, in degrees, of angle *TYZ*?

Enter your answer in the box.

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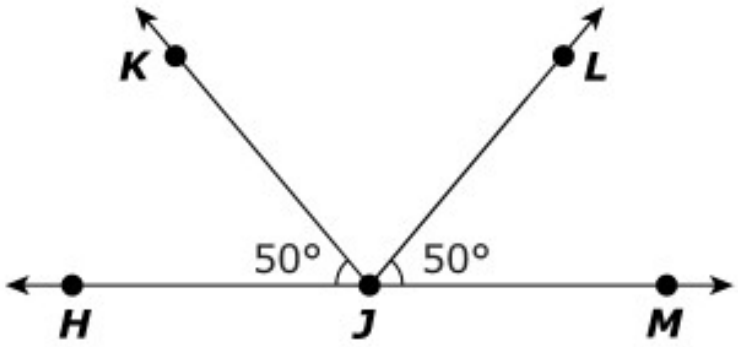
Part B

The figure shows angle *HJM*. The measure of angle *HJM* is 180°.

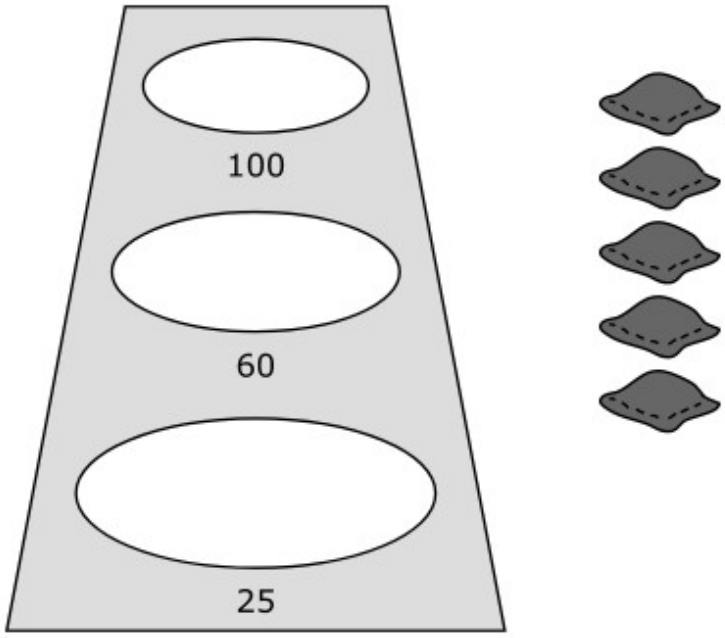


What is the measure, in degrees, of angle *KJL*?

- A. 50
- B. 80
- C. 100
- D. 130

24. **M400294P**

Two friends are playing beanbag toss with a game board. The picture shows the game board and the beanbags the friends use.



For each turn, a player tosses 5 beanbags toward the game board. Each beanbag that goes through a hole in the game board earns points as follows.

- Beanbags that go through the top hole earn 100 points each.
- Beanbags that go through the middle hole earn 60 points each.
- Beanbags that go through the bottom hole earn 25 points each.

The first friend to play has all 5 beanbags go through a hole and earns 230 points. Which holes did the 5 beanbags go through?

A. 1 in the top hole and 4 in the bottom hole

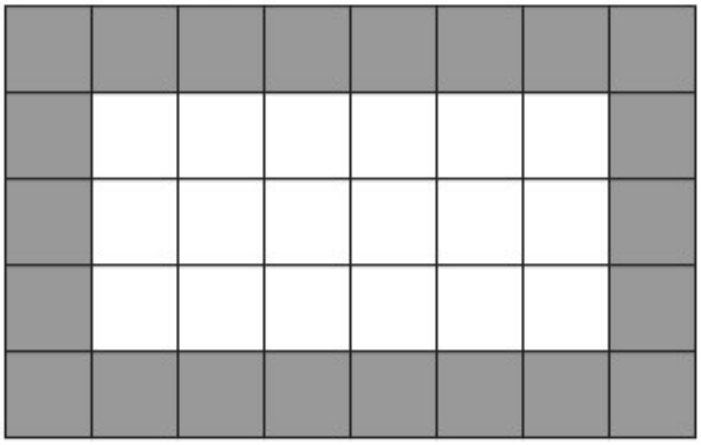
B. 2 in the middle hole and 3 in the bottom hole

C. 3 in the middle hole and 2 in the bottom hole

D. 1 in the top hole, 1 in the middle hole, and 3 in the bottom hole

25. **0640-M20679**

A patio has white tiles and gray tiles.



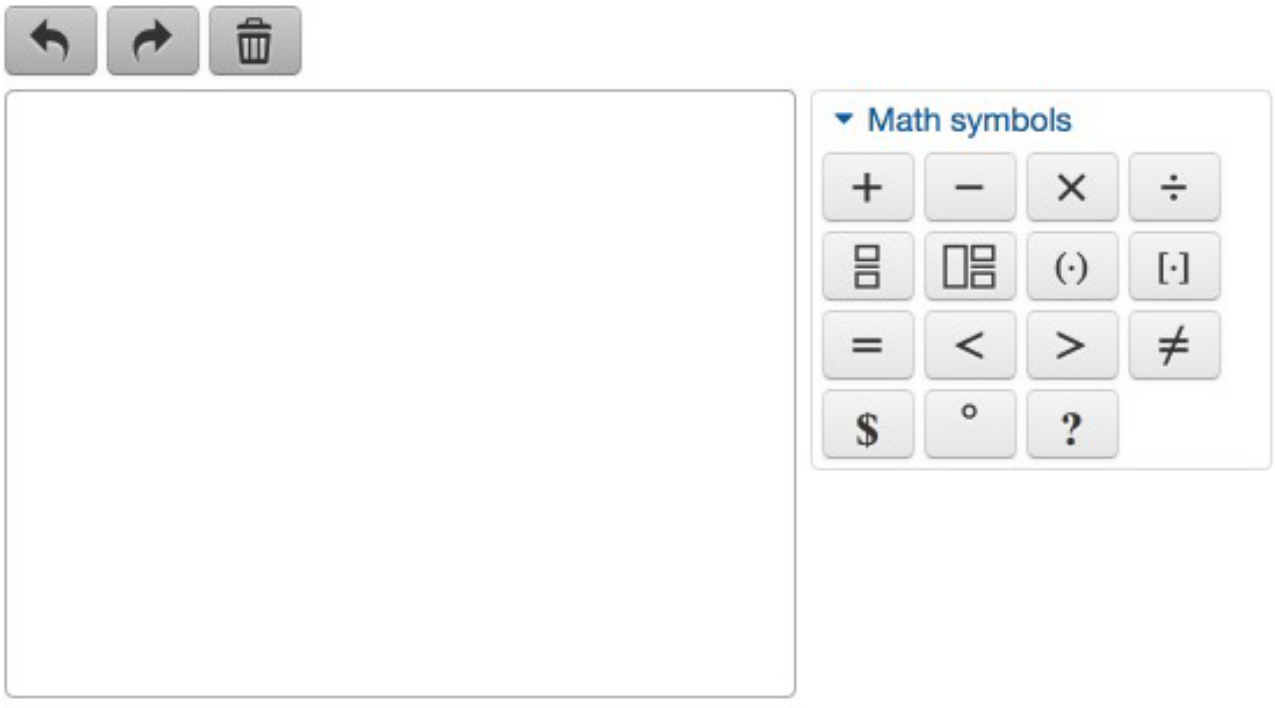
Each tile represents 1 square foot.

Part A

A student states that the only way to determine the area of the entire patio is to count the number of squares one at a time.

Explain a different way to determine the area of the entire patio. Include the area of the entire patio in your explanation.

Enter your explanation in the space provided.



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25. (continued from previous page) **0640-M20679**

Part B

A student states that the area of the gray border is 2 square feet more than the white area inside the border.

Explain how to find the correct difference between the area of the border and the area inside the border. Include the correct difference in your explanation.

Enter your explanation in the space provided.

Math symbols

+ − × ÷

= < > ≠

$ ° ?

26. **M00569**

Which number correctly completes the equation shown?

$$5\frac{4}{8} + 1\frac{3}{8} = \square$$

A. $\frac{33}{16}$

B. $\frac{55}{8}$

C. $4\frac{1}{8}$

D. $6\frac{7}{16}$

27. **VH058368**

Mr. Clark drives a bus 4,435 miles each month.

Exactly how many miles does he drive the bus in 6 months?

Enter your answer in the box.

28. **M03191**

Represent the statement "11 times as many as 10 is 110" as an equation.

Drag and drop a number or symbol into each box to create the equation.

+	−	×	÷	=	11	10	21	110

29. **0320-M01487**

Lucas used $\frac{5}{8}$ of a loaf of bread to make sandwiches.

Part A

Which expressions are equivalent to the total amount of bread Lucas used to make sandwiches?

Select the **three** correct answers.

- [ ] A. $\frac{3}{8} + \frac{2}{8}$
- [ ] B. $2 + \frac{3}{8}$
- [ ] C. $\frac{1}{8} + \frac{2}{8} + \frac{2}{8}$
- [ ] D. $1 + 1 + \frac{3}{8}$
- [ ] E. $\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$
- [ ] F. $\frac{8}{8} + \frac{8}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$

Part B

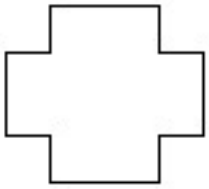
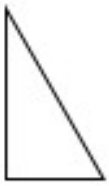
Lucas used $\frac{7}{8}$ of a second loaf of bread to make French toast. What fraction of the loaves of bread did he use for sandwiches and French toast?

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

30. **M00955P**

Which shapes have exactly two pairs of parallel lines?

Select the **two** correct answers.

- ☐ A. 
- ☐ B. 
- ☐ C. 
- ☐ D. 
- ☐ E. 
- ☐ F. 

31. **VH079772**

In January, Brady sold 2,568 books at his bookstore. He sold 4,325 books in January and February combined.

Exactly how many books did Brady sell in February?

Enter your answer in the box.