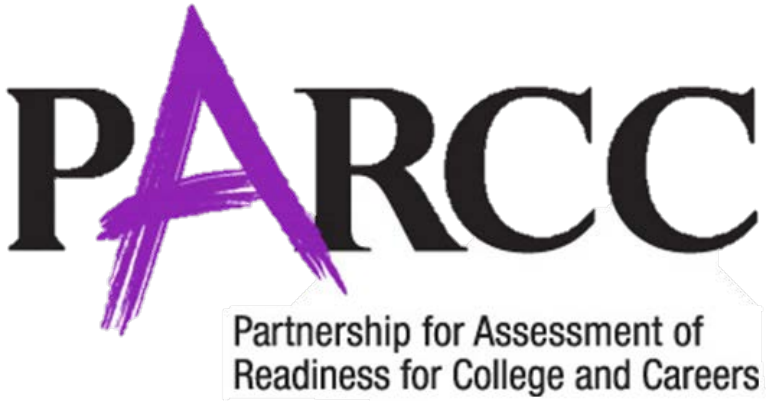


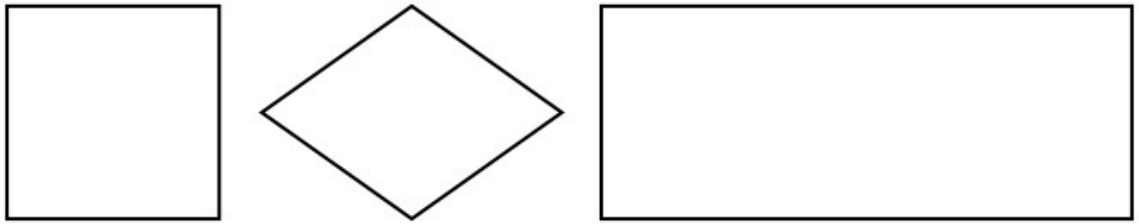
Math

Spring Operational 2016

Grade 3

Released Items

The three shapes below belong to a group. All shapes in the group have exactly 4 sides and exactly 4 angles.



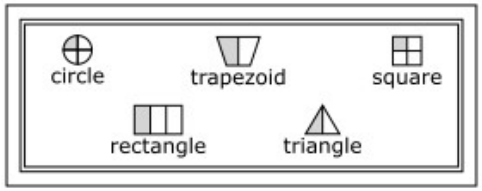
Which of the following shapes belong in the group?

- A. a triangle
- B. a trapezoid
- C. a pentagon
- D. a hexagon

2

M00916P

A teacher drew shapes on the board and shaded a fraction of each shape. Each shape was divided into equal parts.



Which table shows the correct fractions for the shaded parts of the shapes?

A.

Fraction	Shape(s)
$\frac{1}{1}$	trapezoid, triangle
$\frac{2}{1}$	rectangle
$\frac{3}{1}$	circle, square

B.

Fraction	Shape(s)
$\frac{1}{1}$	trapezoid, triangle
$\frac{1}{2}$	rectangle
$\frac{1}{3}$	circle, square

C.

Fraction	Shape(s)
$\frac{1}{2}$	trapezoid, triangle
$\frac{1}{3}$	rectangle
$\frac{1}{4}$	circle, square

D.

Fraction	Shape(s)
$\frac{1}{2}$	trapezoid, triangle
$\frac{2}{3}$	rectangle
$\frac{3}{4}$	circle, square

The clocks show when Jemma started and finished her homework.

Start

Finish

Which statements are true?

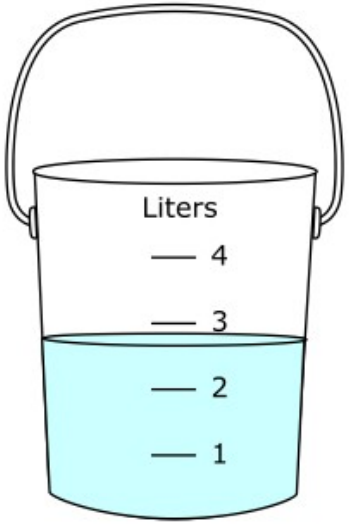
Select the **three** correct answers.

- [ ] A. Jemma started her homework at 3:21.
- [ ] B. Jemma spent 42 minutes on her homework.
- [ ] C. Jemma finished her homework at 4:42.
- [ ] D. Jemma spent 21 minutes on her homework.
- [ ] E. Jemma started her homework at 4:17.
- [ ] F. Jemma finished her homework at 3:42.

4

M01399

Which is the **best** estimate of the amount of water in the bucket?



A. 4 liters

B. 3 liters

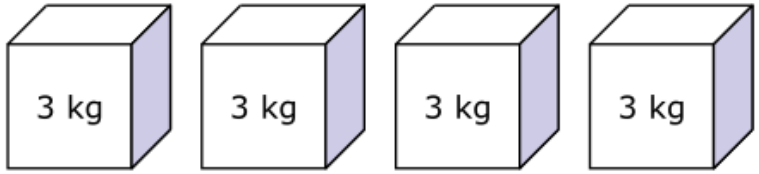
C. 2 liters

D. 1 liter

5

M03158

Each of 4 cubes has a mass of 3 kilograms as shown.



What is the total mass, in kilograms, of the 4 cubes?

Enter your answer in the box.

6

M00006

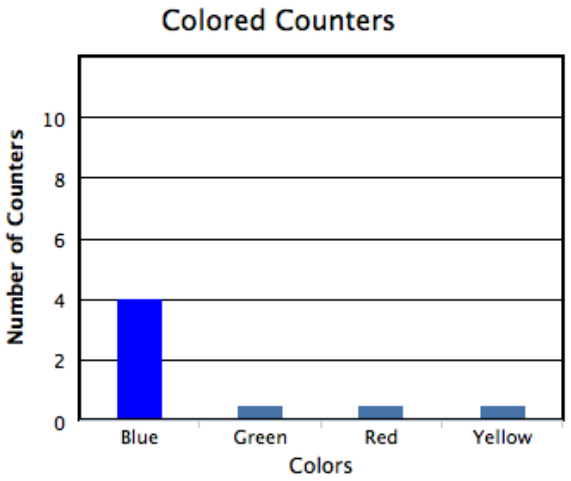
The table shows a number of different colored counters. Sandy is going to create a bar graph to represent the data in the table.

Colored Counters

Color	Counters
Blue	4
Green	7
Red	6
Yellow	9

Use the table to complete the bar graph.

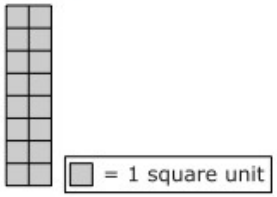
Drag and drop the top of each bar to the correct height on the graph.



7

M00016

Aly tiled this figure with same-sized unit squares.



What is the area of the figure?

Enter your answer in the box.

[ ] square units

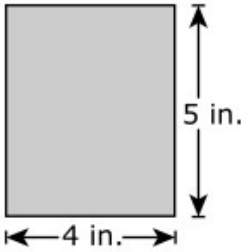
8

M00365P

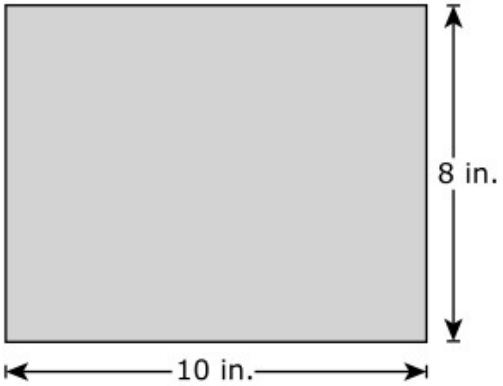
Joseph bought two pictures in the shape of rectangles. Each picture had an area of 18 square inches.
Which pictures did he buy?

Select the **two** correct answers.

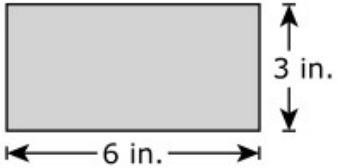
☐ A.



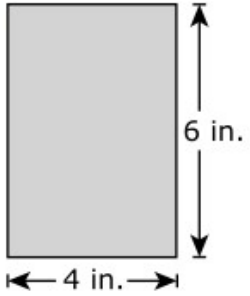
☐ B.



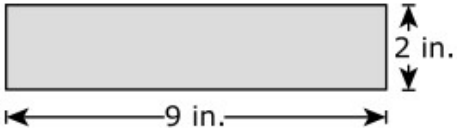
☐ C.



☐ D.

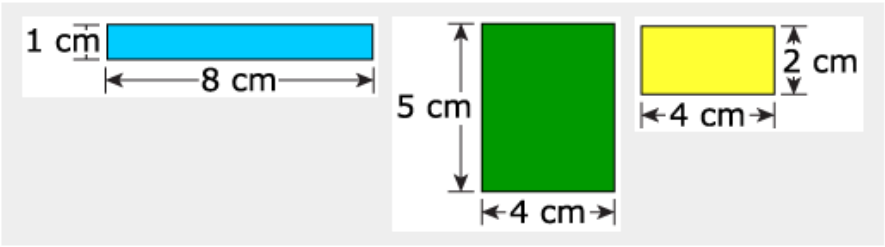


☐ E.



Three rectangles are shown. Which two rectangles go in each box?

Drag and drop two of the rectangles into each box. The rectangles can be used more than once.



Same Area and Different Perimeters	Same Perimeter and Different Areas	Different Areas and Different Perimeters

10

M01214

What is the value of $518 - 426$?

- A. 82
- B. 92
- C. 112
- D. 192

11

VH006903

Solve.

Enter your answer in the box.

$605 + 195 =$ ☐

12

M03643

Complete each equation.

Drag and drop each correct answer into the appropriate box.

$8 \times 70 =$ ☐

$4 \times 40 =$ ☐

$5 \times 50 =$ ☐

$3 \times 60 =$ ☐

120	160	180	250	270	360	560	630

13

VH079766

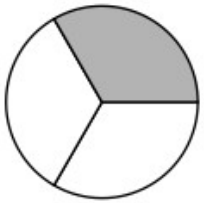
Enter your answer in the box.

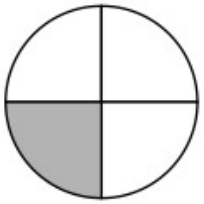
$4 \times 50 =$ ☐

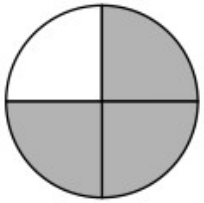
14

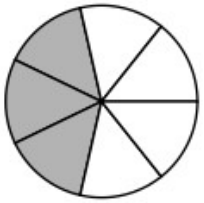
VH014757

Which circle shows $\frac{3}{4}$ shaded gray?

A. 

B. 

C. 

D. 

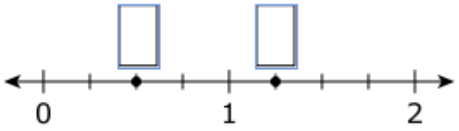
15

M00360

Which fractions represent the points shown on the number line?

Drag and drop the fractions into the boxes.

$\frac{5}{4}$ $\frac{5}{8}$ $\frac{3}{4}$ $\frac{2}{8}$ $\frac{2}{4}$ $\frac{6}{4}$



16

VF556026

The number line shows a point at $\frac{2}{3}$.

Which fraction is equal to $\frac{2}{3}$?

- A. $\frac{1}{2}$
- B. $\frac{3}{4}$
- C. $\frac{4}{6}$
- D. $\frac{5}{6}$

17

M02506

Which fraction is equivalent to the number 4?

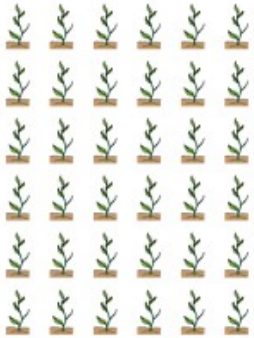
- A. $\frac{1}{4}$
- B. $\frac{1}{1}$
- C. $\frac{4}{4}$
- D. $\frac{4}{1}$

18

M01875

Mr. Dixon has 18 plants to put in his garden. He puts 6 plants in each row.

Which picture shows Mr. Dixon's garden?

- A. 
- B. 
- C. 
- D. 

19

M03682

Which number of stickers could be found using $24 \div 4$?

A. The number of stickers left when 4 of the 24 stickers are given away.

B. The total number of stickers in a book with 24 pages when 4 stickers are placed on each page.

C. The total number of stickers on a page with 24 stickers and 4 more stickers are added to the page.

D. The number of stickers in each row when a total of 24 stickers are equally placed into 4 rows on a page.

20

VF909889

Ms. Renata has 7 packages of hair clips for her beauty shop. There are 10 hair clips in each package.

How many hair clips does she have in all?

_____ hair clips

21

M01789

Nicole buys bags of soil to plant flower seeds. The total weight of the soil is between 35 and 55 pounds.
What can be the number and weight of the bags of soil that Nicole buys?

Select the **three** correct answers.

- ☐ A. 6 bags of soil that each weigh 6 pounds
- ☐ B. 6 bags of soil that each weigh 9 pounds
- ☐ C. 7 bags of soil that each weigh 8 pounds
- ☐ D. 8 bags of soil that each weigh 6 pounds
- ☐ E. 9 bags of soil that each weigh 7 pounds
- ☐ F. 9 bags of soil that each weigh 9 pounds

22

VF819705

Bill has 32 cherry tomatoes. He puts an equal number of cherry tomatoes in each of 8 salads.

How many cherry tomatoes does Bill put in each salad?

Enter your answer in the box.

[ ] cherry tomatoes

23

M01790

Mr. Lopez has a 72-inch-long piece of fabric. He cuts the fabric into pieces that are each 8 inches long. How many 8-inch-long pieces of fabric does Mr. Lopez have?

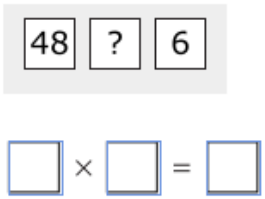
- A. $8 \div 8 = 72$
- B. $8 \div 72 = 9$
- C. $72 \div 8 = 9$
- D. $72 \div 8 = 8$

24

M00346

Create an equation that could be used to find the missing number in $48 \div 6 = \ ?$

Drag and drop the numbers and question mark into the boxes.



25

VF653291

Solve these equations.

Enter your answers in the boxes.

$5 \times 5 =$

$4 \times 2 =$

$3 \times 3 =$

$1 \times 9 =$

$4 \times 6 =$

26

M02370

Which expressions have a quotient equal to 9?

Select the **four** correct answers.

- [ ] A. $36 \div 9$
- [ ] B. $45 \div 5$
- [ ] C. $54 \div 6$
- [ ] D. $63 \div 7$
- [ ] E. $64 \div 8$
- [ ] F. $81 \div 9$

The snack booth at a baseball game sold this many drinks:

- 128 on Wednesday
- 254 on Thursday
- 391 on Friday

Part A

Round the number of drinks sold each day to the nearest hundred.

Drag and drop the digits into each box to show the number of drinks sold for each day rounded to the nearest hundred.

1	2	3	4	5	6	7	8
9	0						

	Nearest Hundred
Wednesday =	☐☐☐
Thursday =	☐☐☐
Friday =	☐☐☐

Part B

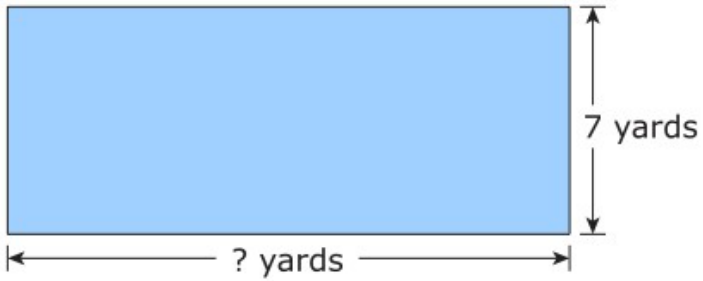
What was the total number of drinks sold, rounded to the nearest hundred?

- A. 600
- B. 700
- C. 800
- D. 900

28

M03591

A path is built around a pool in the shape of a rectangle. The pool is shaded blue.



The width of the pool is 7 yards. The area of the pool is 70 square yards.

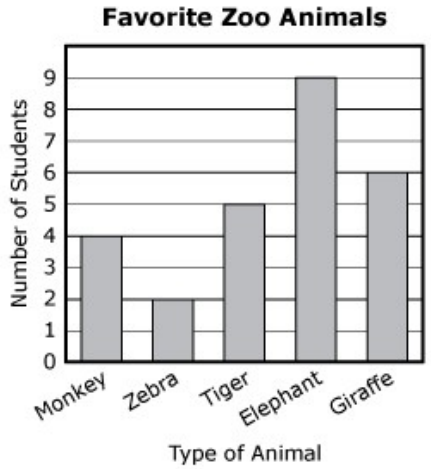
- Find the length, in yards, of the pool.
- Find the perimeter, in yards, of the pool.

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

Length of the pool: ☐ yards

Perimeter of the pool: ☐ yards

Each student in Mr. Hawke's class gave one vote for his or her favorite type of zoo animal. The graph shows the results.



Part A

What is the total number of students in Mr. Hawke's class?

- A. 10
- B. 24
- C. 26
- D. 50

Part B

What is the difference between the total number of students in Mr. Hawke's class and the number of students who voted for elephants?

Enter your answer in the box.

Part A

A teacher has a total of 2 pencils and 6 markers in his desk.

- The teacher needs a total of 50 pencils.
- Each package of pencils has 6 pencils.

How many packages of pencils are needed for the teacher to have a total of 50 pencils in all?

Enter your answer in the box.

Part B

A teacher has a total of 2 pencils and 6 markers in his desk.

The teacher buys 9 packages of markers. Each package has 4 markers. How many markers does the teacher have in all?

Enter your answer in the box.

VF558613

Martin bought packages of juice boxes. He created the number pattern shown to find the total number of juice boxes he has.

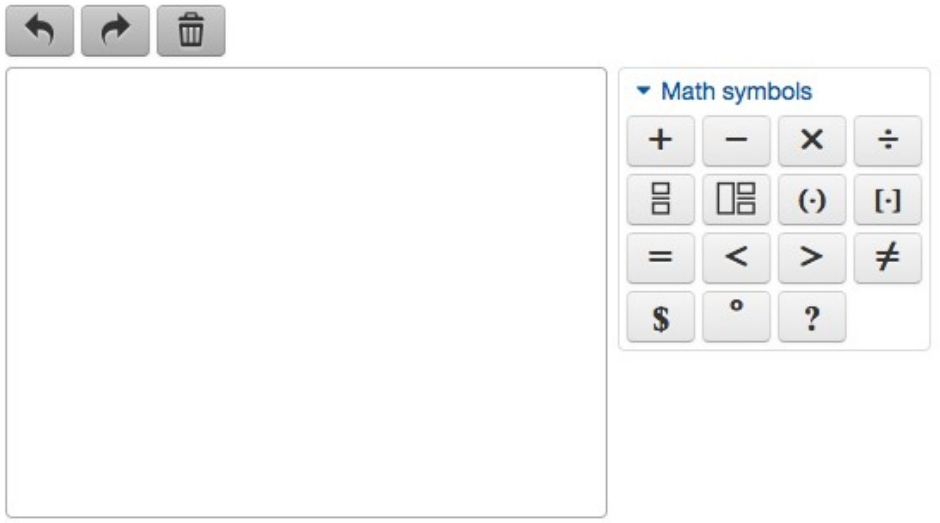
6, 12, 18, 24, 30, 36, ...

Martin says that he created the pattern by adding the same number each time.

Describe how to find the number that Martin used to create the pattern. Then explain how you can use multiplication to create the same pattern.

Can 55 be included in this pattern? Explain why or why not.

Enter your answer and explanation in the space provided.



Zora found the value of 4×5 . The steps she followed are shown.

- First, she broke apart the 5 into $3 + 2$ and said that 4×5 is the same as $4 \times (3 + 2)$.
- Zora then said $4 \times (3 + 2)$ is the same as $12 + 2$ because the problem should be completed from left to right.

Part A

List which part of Zora's reasoning is correct and which part of Zora's reasoning is **not** correct. Be sure to label which part is correct and which part is **not** correct in your list.

Enter your answer in the space provided.

Math symbols

Part B

Explain how Zora should correct the part of her reasoning that is **not** correct and find the correct value.

Enter your answer and your explanation in the space provided.

Math symbols

The students in Rick's class read a total of 172 books in January and a total of 180 books in February.

Part A

Rick says that the students read more books in January than in February.

Explain whether Rick made an error or not. Use place value in your explanation.

Enter your explanation in the space provided.

Math symbols

Part B

Use <, =, or > to write a comparison between the total number of books read in January and the total number of books read in February.

Enter your comparison in the space provided.

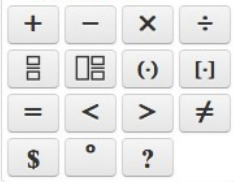
Math symbols

Part C

What is the total number of books read in January and February? Write an equation to show your answer.

Enter your equation in the space provided.

Math symbols

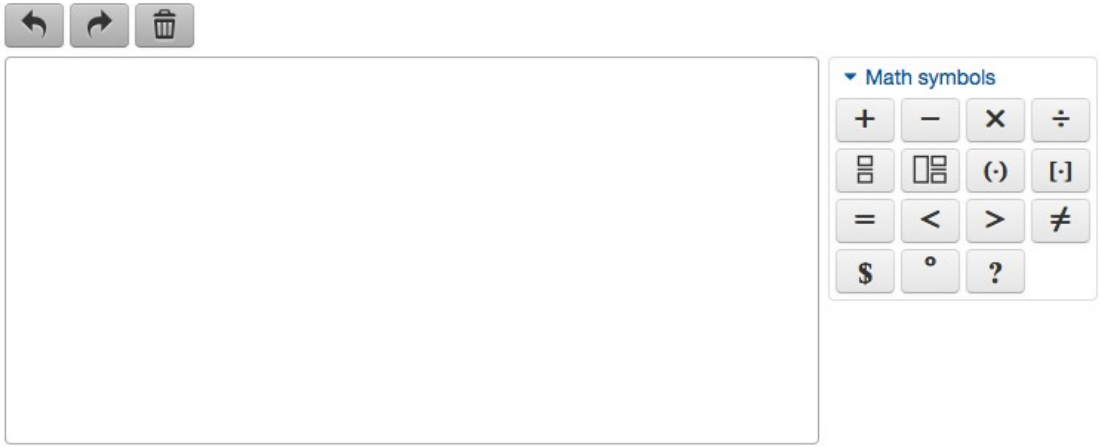


Part A

A jar with 64 fluid ounces of water is used to fill cups. The jar is used to fill 3 cups each with 8 fluid ounces of water and 2 cups each with 9 fluid ounces of water.

- How many total fluid ounces of water are left in the jar after filling all of the cups? Show your work or explain your answer.

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



Part B

A different jar has 42 fluid ounces of water. All of the water in the jar is used to fill cups.

Write an equation to show how many cups can be filled if each cup is filled with 7 fluid ounces of water. Use p as the unknown number of cups in your equation.

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