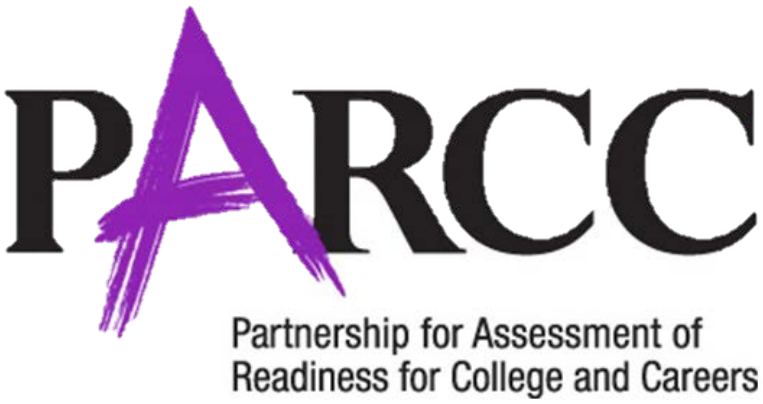


Math

Spring 2018

Grade 3

Released Items

1. **M00903**

Create a model that shows 4×7.

Drag and drop the ducks into the box.

Model

2. **M03973**

Add.

$$\begin{array}{r} 528 \\ +288 \\ \hline ? \end{array}$$

Enter your answer in the box.

3. **M03286**

A student starts practicing the piano at 3:47 p.m. The student finishes practicing the piano at 4:13 p.m.

For exactly how many minutes does the student practice the piano?

Enter your answer in the box.

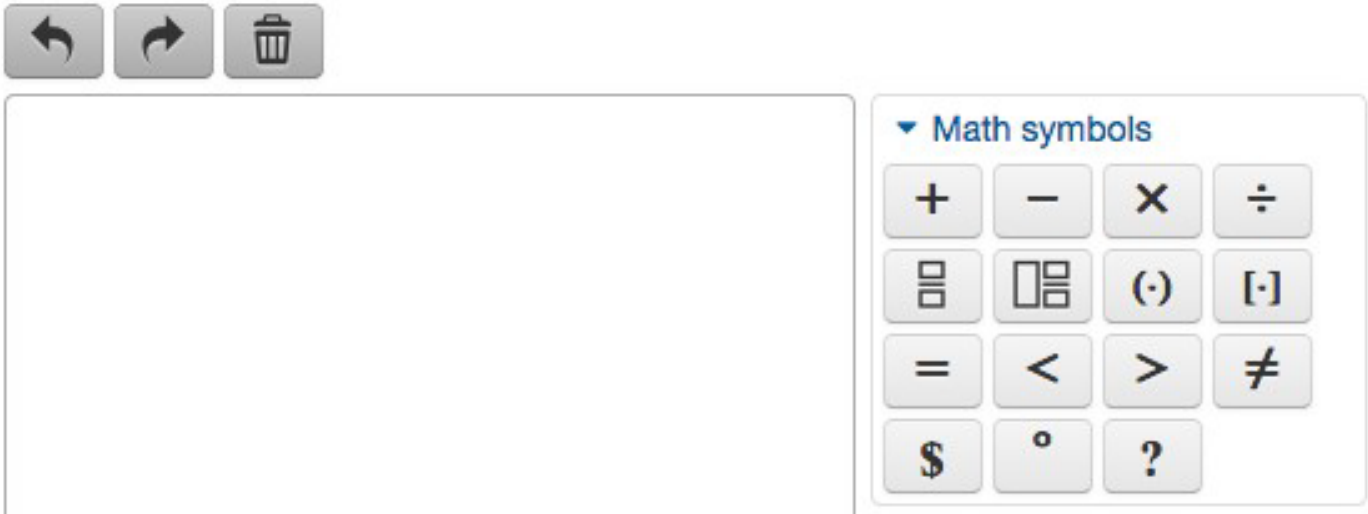
A teacher plans to use ropes to make stations in the gym. Each rope is a different length and color.

- The white rope is 45 feet long.
- The blue rope is 30 feet long.
- The yellow rope is 10 feet long.

Part A

- Write an equation or equations to find the total length, in feet, of the white, blue, and yellow ropes. Use the letter *t* in your equation to show the total length of all of the ropes.
- Find the total length, in feet, of the white, blue, and yellow ropes.
- Show your work or explain your answer.

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



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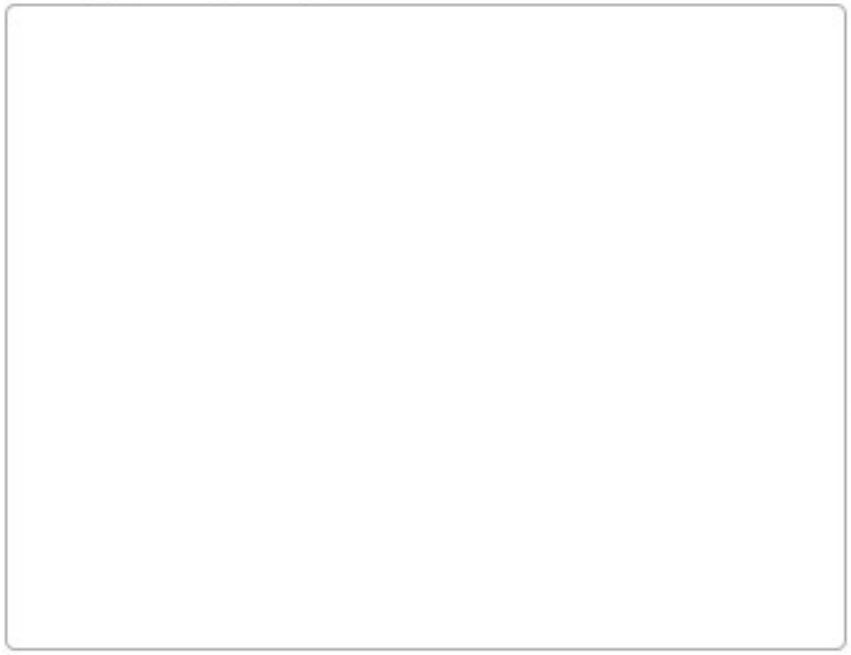
Part B

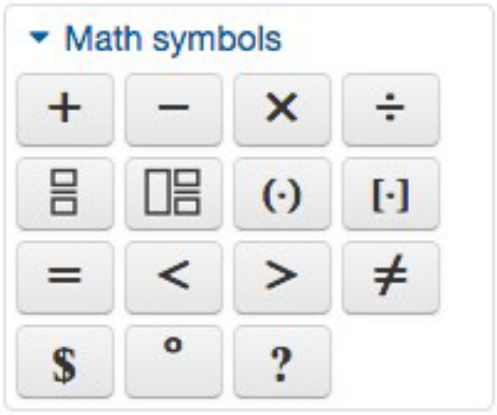
The teacher finds a green rope in the gym. The green rope has a length of k feet.

The teacher needs 58 feet of rope to make a new station in the gym. She will use all of the green rope and part of the blue rope. When she is done, there is 6 feet of extra blue rope.

- Find the length of the green rope.
- Show your work or explain your answer.
- Write an equation or equations that can be used to find the length of the green rope. Use the letter k in your equation to show the length of the green rope.

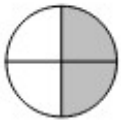
Enter your answer, your work or your explanation, and your equation or equations in the space provided.





5. **M00005P**

Adam ate $\frac{2}{3}$ of a pancake. Which model shows how much Adam ate?

A. 

B. 

C. 

D. 

6. **M03017**

A school band is getting ready for a parade. There are a total of 36 children in the band. The children need to arrange themselves in rows. Each row must have the same number of children.

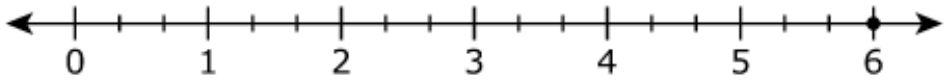
Choose the possible ways the children can arrange themselves in equal rows.

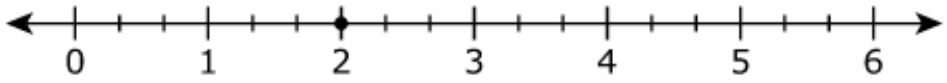
Select the **two** correct answers.

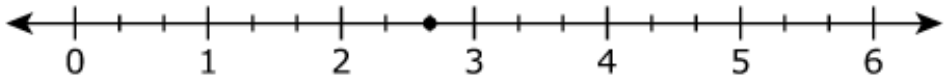
- [ ] A. 3 rows of 10 students
- [ ] B. 4 rows of 8 students
- [ ] C. 6 rows of 6 students
- [ ] D. 7 rows of 5 students
- [ ] E. 9 rows of 4 students
- [ ] F. 16 rows of 2 students

7. **VH154887**

Select the number line that has a point plotted at $\frac{6}{3}$.

A. 

B. 

C. 

D. 

8. **VF812742**

At a craft sale, Laura sold 8 drawings for $6 each. She also sold a toy wagon. Laura was paid a total of $63 for those items.

Laura's friend thinks the cost of the toy wagon was $49 because $63 - 8 - 6 = 49$.

Part A

Explain the error that Laura's friend made in finding the c

Enter your explanation in the space provided.

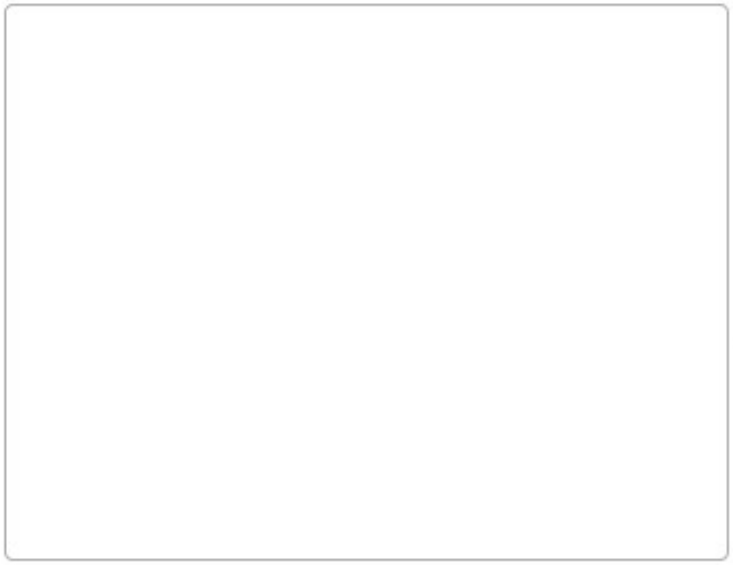
(continues on next page)

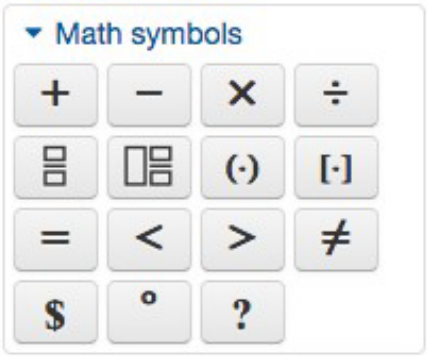
8. (continued from previous page) **VF812742**

Part B

Write an equation or equations to show all of the steps Laura's friend should use to find the cost of the wagon.

Enter your equation or equations in the space provided.





Part C

What is the correct cost, in dollars, of the wagon?

Enter your answer in the box.

9. **M01424**

Which expressions have a value of 8?

Select the **three** correct answers.

- ☐ A. $64 \div 8$
- ☐ B. $81 \div 9$
- ☐ C. $48 \div 6$
- ☐ D. $56 \div 7$
- ☐ E. $63 \div 9$

10. **0108-M00557**

Part A

A store sells bags of beads. Each bag has 23 red beads and 17 blue beads. A teacher buys 7 bags of beads.

How many total beads did the teacher buy?

Enter your answer in the box.

Part B

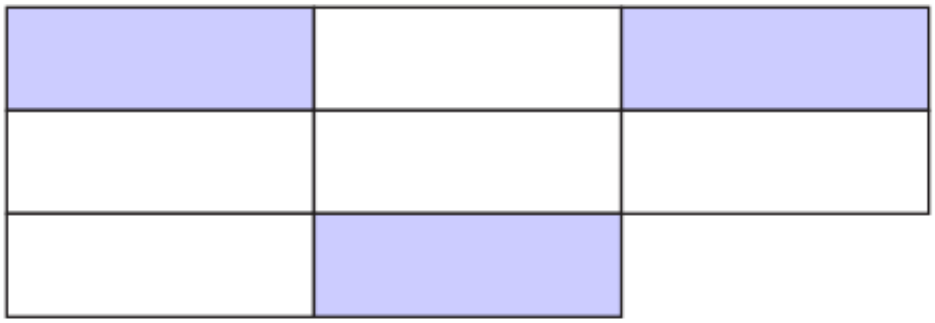
A store sells bags of beads. Each bag has 23 red beads and 17 blue beads. A teacher evenly divides 1 bag of beads among her 8 students.

How many beads does each student get?

Enter your answer in the box.

11. **M03502**

The figure is divided into parts with equal areas as shown.

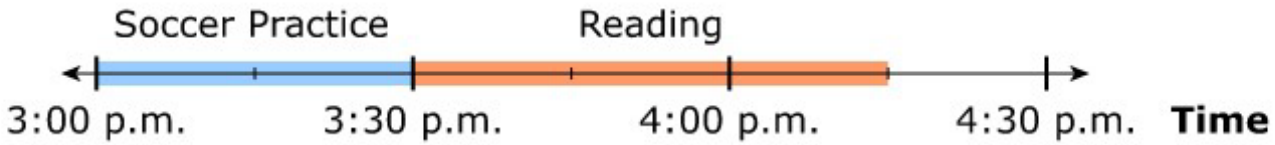


What fraction of the figure is shaded?

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

12. **M03419**

The blue bar on the number line shows the amount of time a student spends at soccer practice. The orange bar shows the amount of time the student spends reading.



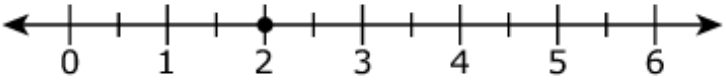
Exactly how many **more** minutes does the student spend reading than the student spends at soccer practice?

Enter your answer in the box.

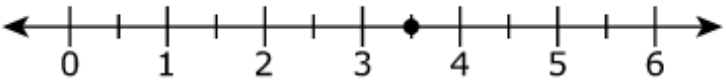
13. **VH004708**

Which number line has a point plotted to represent $\frac{5}{2}$?

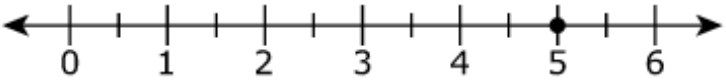
A.



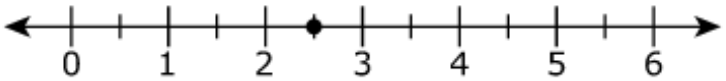
B.



C.



D.



14. **VF522153**

Fill in the boxes to solve the equations.

Enter your answers in the boxes.

$6 \times 5 =$ ☐

$5 \times 6 =$ ☐

$7 \times 5 =$ ☐

$30 \div 6 =$ ☐

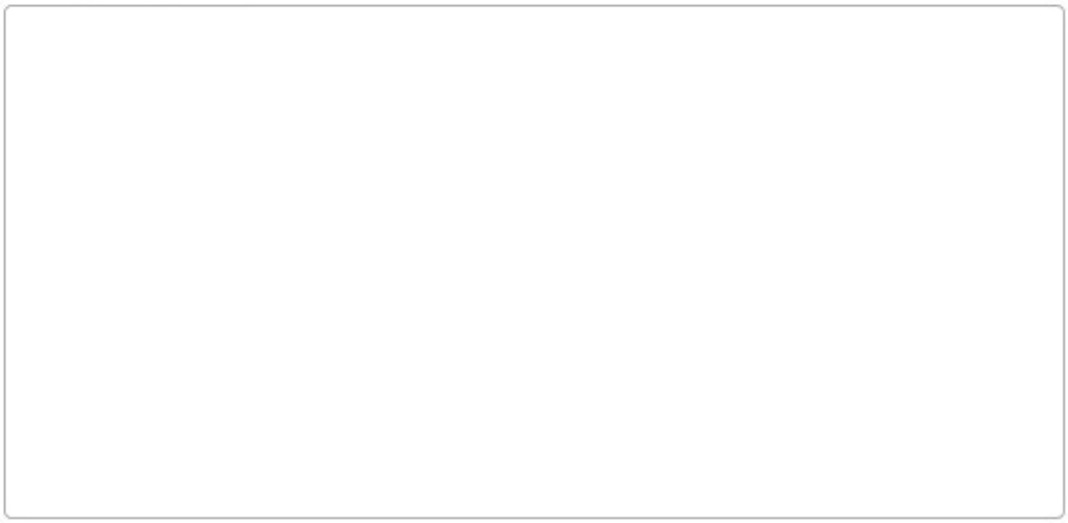
$40 \div 5 =$ ☐

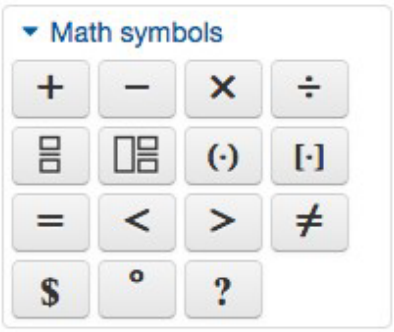
15. **M01633**

Jennifer is going to the fair with 8 of her friends. She has 36 tickets left over from her last visit to the fair and buys 27 more tickets during this visit. She wants to give the same amount of tickets to each of her friends and herself. How many tickets did Jennifer and her friends each receive?

Show your work.

Enter your answer and your work in the space provided.





16. **VF556062**

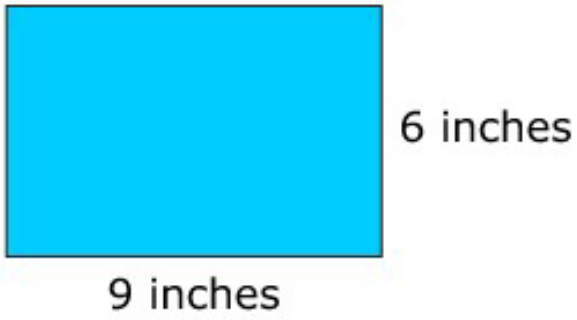
Which of these does $18 \div 3$ represent?

Select the **two** correct answers.

- A. the number of pencils remaining after 3 pencils are sold out of 18 pencils
- B. the total number of pencils when 3 pencils are added to a row of 18 pencils
- C. the total number of pencils sold when 18 pencils are sold each day for 3 days
- D. the number of pencils in each row when 18 pencils are put into 3 equal rows
- E. the number of pencils sold each day when a total of 18 pencils are sold in equal numbers on each of 3 days

17. **M00065**

A model rocket launch pad has the measurements shown.



What is the total number of square inches of the model rocket launch pad?

Enter your answer in the box.

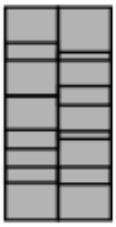
18. **M01186**

James has 42 inches of string. He cuts the string into 7 equal pieces. How long is each piece of string?

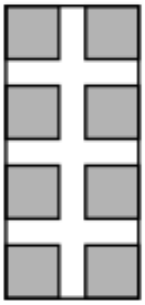
- A. 6 inches
- B. 7 inches
- C. 8 inches
- D. 9 inches

19. **VH055538**

Which figure correctly models how square units can be used to find the total area?

A. 

B. 

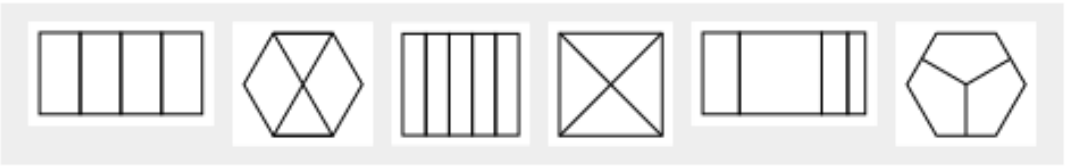
C. 

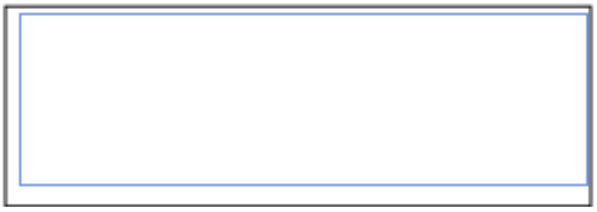
D. 

20. **VH094356**

Select the **two** shapes that show all parts that are $\frac{1}{4}$ the area of the shapes.

Drag and drop each shape into the box.





21. **VF497937**

$$7 \times ? = 63$$

What number should replace the question mark (?) in the equation shown to make the equation true?

Enter your answer in the box.

22. **VF556728**

Enter your answer in the box.

$516 + 445 =$ ☐

23. **M300165**

There are 63 students who are placed in reading groups. There are 9 reading groups. The same number of students are placed in each group. How many students are placed in each group?

- A. 7
- B. 8
- C. 54
- D. 72

Juan does sit-ups each day. He will increase the number of sit-ups he does each day. Juan's plan follows a pattern. The table shows the number of sit-ups Juan does each day from day 1 to day 3.

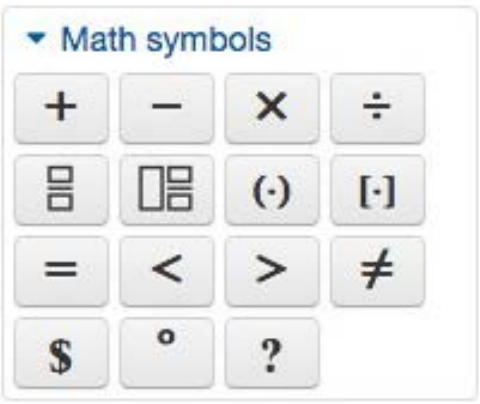
Juan's Sit-Ups

Day	Number of Sit-Ups
1	3
2	9
3	15

Part A

Explain how you could find the number of sit-ups Juan plans to do on day 4 and on day 5.

Enter your explanation in the space provided.



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Part B

How many sit-ups does Juan plan to do on day 4 and on day 5?

A.

Juan's Sit-up Plan

Day	Number of Sit-ups
4	18
5	21

B.

Juan's Sit-up Plan

Day	Number of Sit-ups
4	18
5	24

C.

Juan's Sit-up Plan

Day	Number of Sit-ups
4	21
5	24

D.

Juan's Sit-up Plan

Day	Number of Sit-ups
4	21
5	27

(continues on next page)

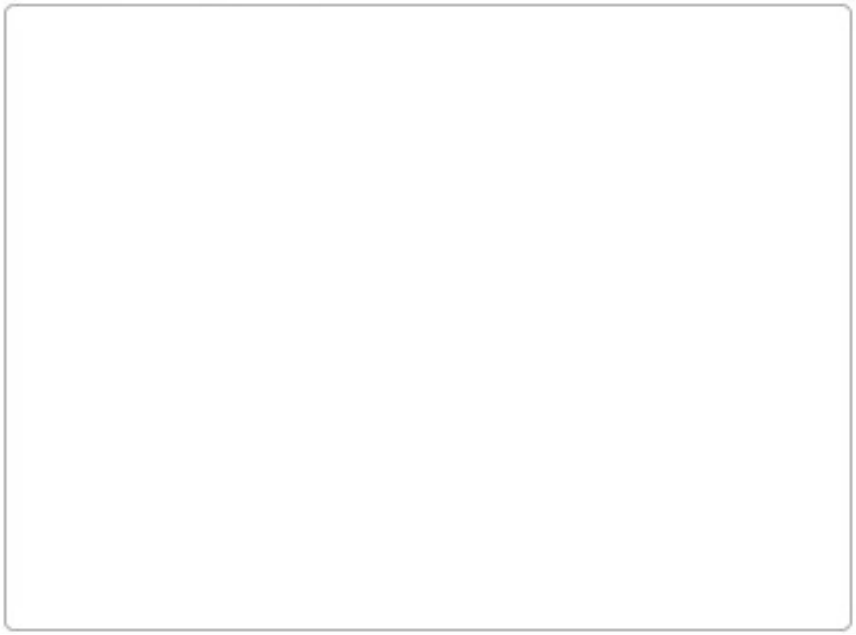
Part C

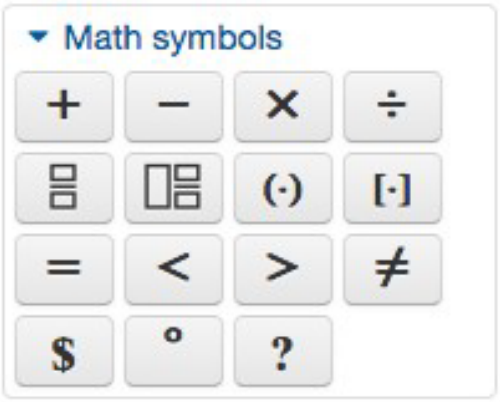
Juan has changed his plans. He will increase the number of sit-ups he does by 10 each day. On day 1, Juan does 10 sit-ups.

Juan says he can quickly find the number of sit-ups he plans to do on day 10 by multiplying 10 times 9 since he plans to increase the number of sit-ups by 10 on each of 9 days.

- Explain why Juan's reasoning is correct or incorrect.
- Include the correct number of sit-ups Juan plans to do on day 10.

Enter your answer and your explanation in the space provided.





25. **M01190**

Which models have the same fractional part shaded as Figure Y? Each model is the same size and the same shape as Figure Y.

Figure Y

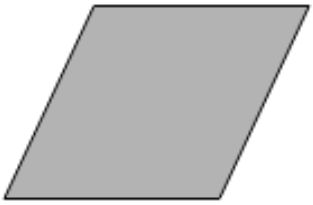
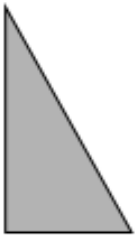
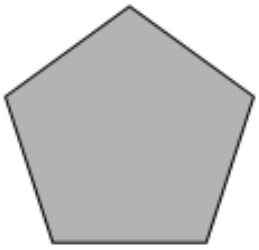
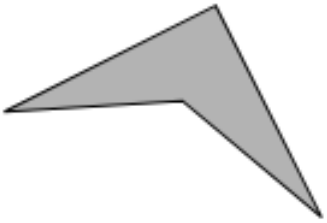
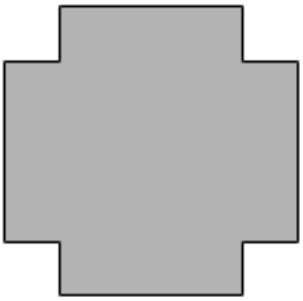
Select the **two** correct answers.

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

26. **M00039P**

Which shapes are quadrilaterals?

Select the **three** correct shapes.

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

27. **M00043**

Reggie and Alaina each ate part of a fruit tart. Reggie ate $\frac{1}{2}$ of the fruit tart and Alaina ate $\frac{1}{4}$ of the fruit tart.

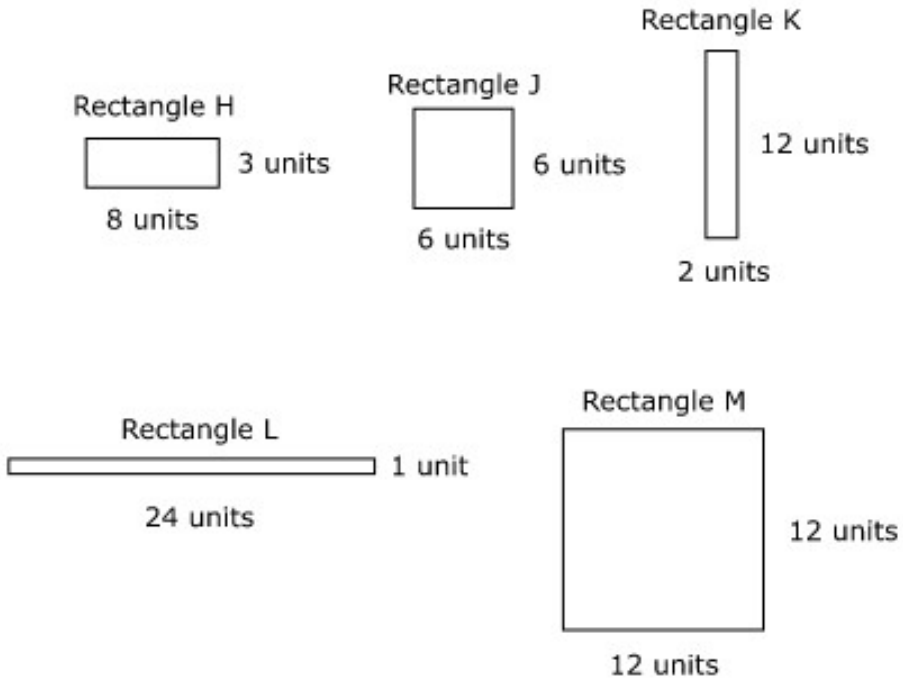
Drag and drop the numbers into the boxes to show a correct comparison of the part Reggie ate and the part Alaina ate.

$\frac{1}{2}$ $\frac{1}{4}$

$\square$ < $\square$

28. **M00007P**

Five rectangles are shown.



Which rectangles have an area of 24 square units and a perimeter greater than 23 units?

Select the **two** correct answers.

- [ ] A. Rectangle H
- [ ] B. Rectangle J
- [ ] C. Rectangle K
- [ ] D. Rectangle L
- [ ] E. Rectangle M

29. **M03102**

In which answer choices could John's total number of books be represented as 4×8?

Select the **two** correct answers.

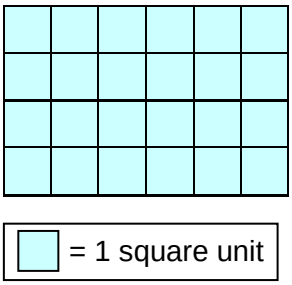
- ☐ A. John had 4 books in a bookcase. He placed 8 more in the bookcase.
- ☐ B. John had 8 books in a bookcase. He placed 4 more in the bookcase.
- ☐ C. John had a bookcase with 4 shelves. He placed 8 books in the bookcase.
- ☐ D. John had a bookcase with 4 shelves. He placed 8 books on each shelf.
- ☐ E. John had a bookcase with 8 shelves. He placed 4 books on each shelf.

30. **1749-M23082**

Part A

Figure H is made using equal-sized square units.

Figure *H*



What is the area, in square units, of Figure *H*?

- ☐ A. 16
- ☐ B. 18
- ☐ C. 20
- ☐ D. 24

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Part B

Figure *Y* and Figure *Z* are each made using equal-sized square units.

Figure *Y*

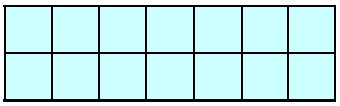
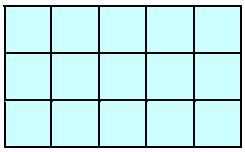


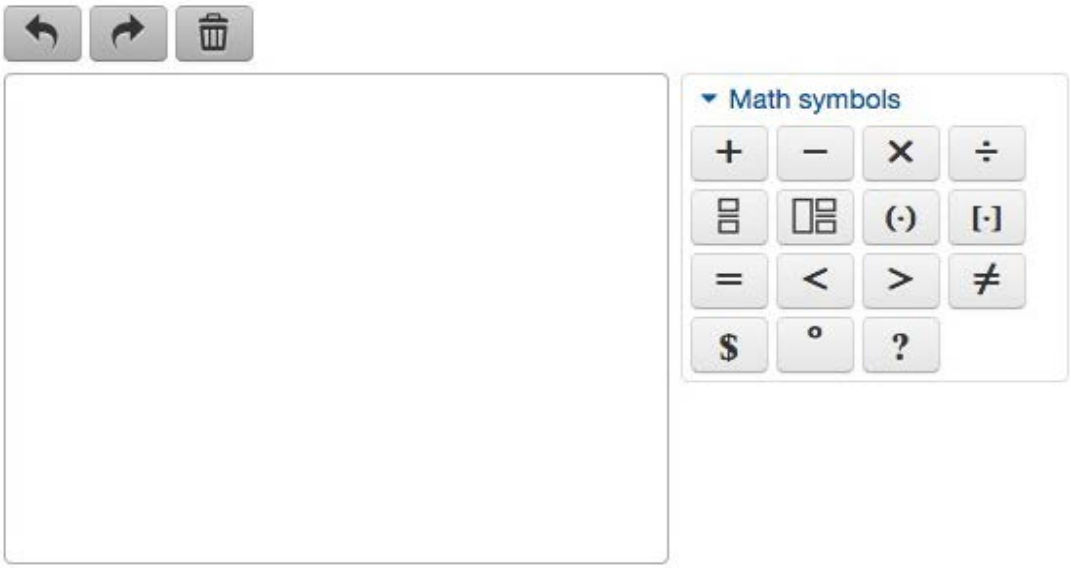
Figure *Z*



= 1 square unit

- Explain why Figure *Y* and Figure *Z* do or do not have the same area.
- Explain what must be true for any two figures to have the same area.

Enter your answers and your explanations in the space provided.



31. **M03986**

What is the product of 8 and 80?

Enter your answer in the box.

32. **M00003**

A softball field has 8 benches on which the players can sit. Each bench can seat 9 players. What is the greatest number of players who can sit on all of the benches at one time?

A. 17

B. 72

C. 80

D. 81

33. **0520-M01433**

Juan and Ella each have a pile of bricks. Juan's bricks have a mass of 671 kilograms. Ella's bricks have a mass of 297 kilograms.

Part A

Select the number from the drop-down menu to complete the statement.

The mass of Juan's bricks is Choose... kilograms **more** than the mass of Ella's bricks.

Choose...
374
426
484
671
968

Part B

Select the number from the drop-down menu to complete the statement.

The total mass of Juan's bricks and Ella's bricks, rounded to the nearest 10, is Choose... kilograms.

Choose...
370
380
400
900
960
970

34. **VH120275**

Select the **three** expressions that have a value of 6.

- ☐ A. 2×3
- ☐ B. $6 \div 1$
- ☐ C. 0×6
- ☐ D. $21 \div 3$
- ☐ E. $24 \div 4$

35. **M01193**

Which fractions are equivalent to a whole number?

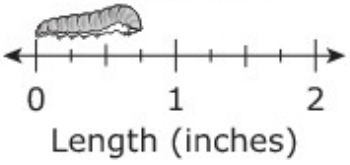
Select the **two** correct answers.

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

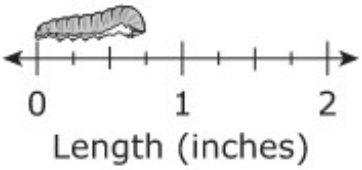
36. **M300196**

A student measures the lengths of five caterpillars for a science project.

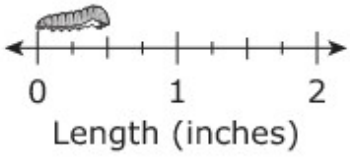
Caterpillar P



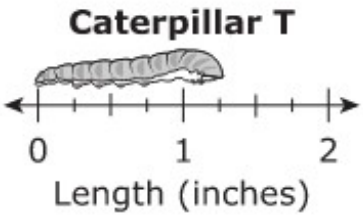
Caterpillar S



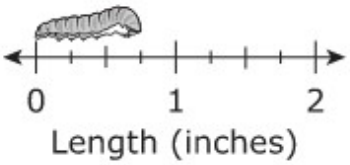
Caterpillar Q



Caterpillar T

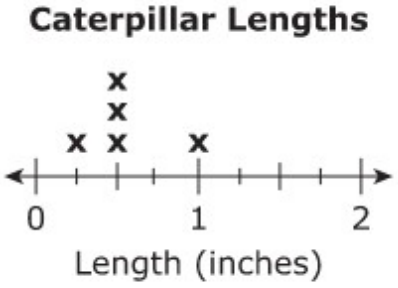


Caterpillar R

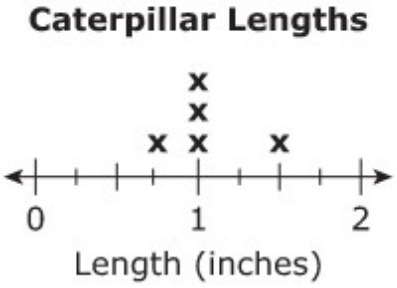


The student uses the measurements to make a line plot. Which line plot is correct?

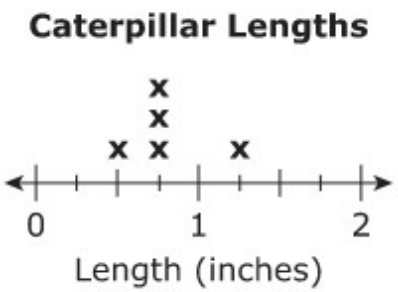
A.



C.



B.



D.