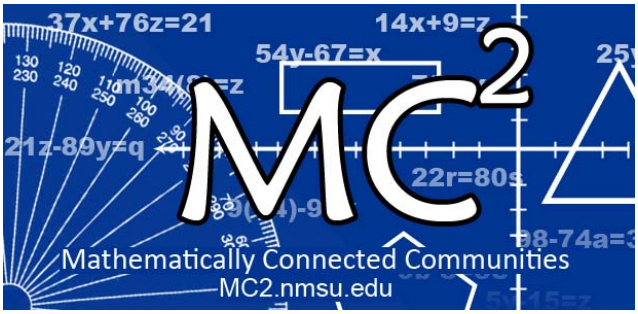
Mathematically Connected Communities



PARCC EOY Practice Test Items
6th Grade Mathematics

Excerpted 11/2014 from
PARCC Online Practice Tests
www.parcconline.org

Mathematical Practice Questions for MC^2 Thinking Protocol

Follow the process below in working with the PARCC practice items found in this packet:

1. Choose items from this packet that relate to math concepts studied in the current or previous curriculum units during your math instruction. Each item may be used as a practice item worksheet.
2. Choose a set of **Thinking/Writing Prompts** below based on the math practice the class is working to develop.
3. Add the prompts to the practice item worksheet or display the prompts for the students to respond to.
4. Continue using the same set of prompts for an extended period of time so children develop competence and confidence in describing their mathematical thinking related to the math practice.

The questions below were intentionally not included on each MC^2 PARCC practice item worksheet in this packet. These are intended to help students move beyond "answer getting" to fully making sense of test item questions and their own mathematical thinking.

Thinking/Writing Prompts to Promote Mathematical Practices

Math Practice 1: **Make sense of problems and persevere in solving them.**

1. What do you know about the problem?
2. What questions do you have?
3. Explain your reasoning or thinking in solving the problem.

Math Practice 3: **Construct viable arguments and critique the reasoning of others.**

1. What are the assumptions, definitions, and previous knowledge to help in thinking about this problem?
2. What are some possible conjectures that you have about the problem?
3. Explain your mathematical argument so that somebody else can make sense of your thinking.

Math Practice 4: **Model with mathematics.**

1. What are the important quantities in the problem that are needed to solve it?
2. What mathematical operation(s) or representation(s) will you use to solve the problem?
3. Explain how you know your answer makes sense in the context of the situation.

Math Practice 6: **Attend to precision.**

1. What are the important units in the problem? (What are we measuring or counting?)
2. What relationship between the units/quantities do you need to know in order to solve the problem?
3. Use appropriate and precise mathematical language, units, labels and computations to clearly describe your mathematical reasoning.

6th Grade PARCC EOY Practice Assessment Item #1: Standard 6.NS.1-2

Joanne buys a rug with an area of $\frac{35}{4}$ square meters. The length of the rug is $\frac{7}{2}$ meters.

What is the width, in meters, of the rug?

6th Grade PARCC EOY Practice Assessment Item #2: Standard 6.SP.3

The median number of points scored by 9 players in a basketball game is 12. The range of the number of points scored by the same basketball players in the same game is 7.

Drag and drop the correct word or phrase to each row of the table to indicate whether the statement is true, false, or does not contain enough information.

True | False | Not Enough Information

Statements	
At least one player scored 12 points.	
The greatest number of points scored could be 19 points.	
The mean number of points is greater than 12 points.	
If the greatest number of points scored is 16, then the least number of points scored is 4.	

6th Grade PARCC EOY Practice Assessment Item #3: Standard 6.NS.3-4

Enter your answer in the box.

$33.8 \div 32.5 =$ _____

6th Grade PARCC EOY Practice Assessment Item #4: Standard 6.EE.4

Select each expression that is equivalent to $3(n+6)$.

Select **all** that apply.

☐ A. $3n+6$

☐ B. $3n+18$

☐ C. $2n+2+n+4$

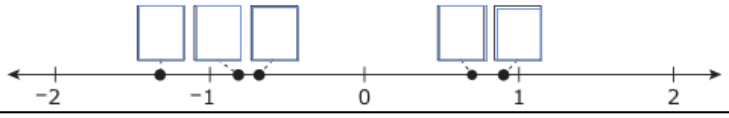
☐ D. $4(n+6)-(n+6)$

☐ E. $4(n+6)-(n-6)$

6th Grade PARCC EOY Practice Assessment Item #5: Standard 6.NS.7a

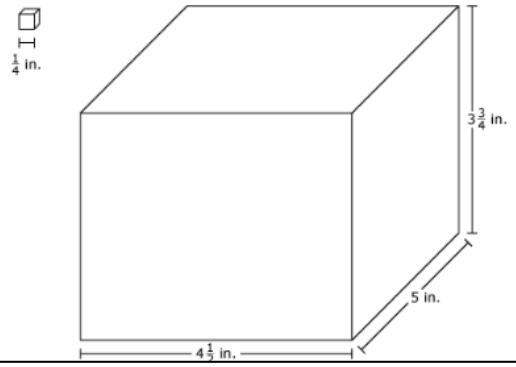
Drag and drop the given rational numbers into the correct order on the number line from least to greatest.

$-\frac{2}{3}$ $\frac{7}{8}$ $-\frac{4}{5}$ $\frac{7}{10}$ $-\frac{4}{3}$



6th Grade PARCC EOY Practice Assessment Item #6: Standard 6.G.1-2

Small cubes with edge lengths of $\frac{1}{4}$ inch will be packed into the right rectangular prism shown.



How many small cubes are needed to completely fill the right rectangular prism?

Enter your answer in the box.

_____ cubes

6th Grade PARCC EOY Sample Assessment Item #7: Standard 6.NS.3-3

Enter your answer in the box.

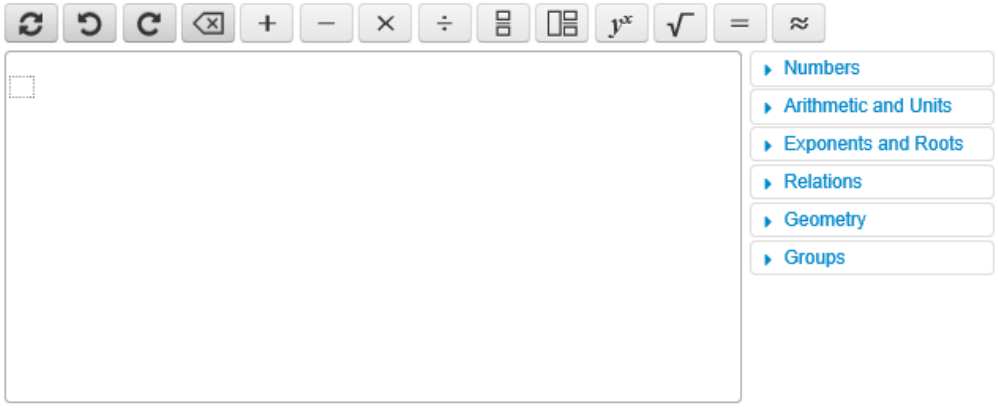
$48.3 \times 7.39 =$ ____

6th Grade PARCC EOY Practice Assessment Item #8: Standard 6.EE.6

During a sale, all pillows are $\frac{1}{4}$ off the regular price.

Use the equation editor to write an expression that represents the amount of money saved on a pillow that had a regular price of d dollars.

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



6th Grade PARCC EOY Practice Assessment Item #9: Standard 6.NS.1-2

Carol makes $9\frac{1}{3}$ cups of snack mix. She puts all the snack mix into plastic bags. She puts $\frac{2}{3}$ cup of the snack mix in each bag.

How many plastic bags does Carol need?

Enter your answer in the box.

_____ plastic bags

6th Grade PARCC EOY Practice Assessment Item #12: Standard 6.SP.1

Which question is a statistical question?

A. How tall is the oak tree?

B. How much did the tree grow in one year?

C. What are the heights of the oak trees in the schoolyard?

D. What is the difference in height between the oak tree and the pine tree?

6th Grade PARCC EOY Practice Assessment Item #13: Standard 6.NS.4-1

What is the greatest common factor of 16 and 48?

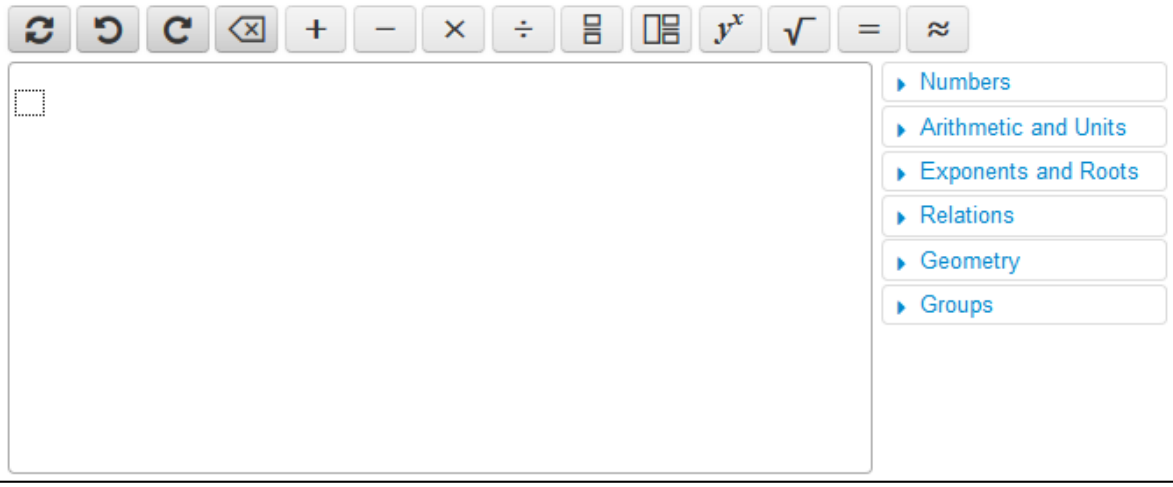
Enter your answer in the box.

6th Grade PARCC EOY Practice Assessment Item #14: Standard 6.EE.1-1

An expression is shown. $7 \cdot 7 \cdot 7 \cdot 7 \cdot 7 \cdot 7$

What is the expression written in exponential form?

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



6th Grade PARCC EOY Practice Assessment Item #15, Standard 6.RP.1

This table shows the number of books, by type, checked out from the school library on Monday.

Book Checkout

Book Type	Number of Books
Mystery	24
Nonfiction	18
Adventure	12
Humor	16

Use the drop-down menus to complete this statement.

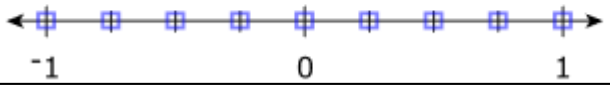
For every Choose... mystery books checked out,

Choose... nonfiction books were checked out.

Choose...
2
3
4
6

6th Grade PARCC EOY Practice Assessment Item #16, Standard 6.NS.6c-1

Select the point on the number line located at $-\frac{3}{4}$.



6th Grade PARCC EOY Practice Assessment Item #17: Standard 6.Int.1

Thomas buys a case of bottled water. A case contains 36 bottles of water and costs $4.69. Thomas will sell each bottle of water for $0.75 at a school event.

How much profit will Thomas earn if he sells all the bottles of water?

Enter your answer in the box.

$

6th Grade PARCC EOY Practice Assessment Item #18: Standard 6.NS.2

Enter your answer in the box.

$34{,}992 \div 81 =$ _____

6th Grade PARCC EOY Practice Assessment Item #19: Standard 6.NS.3-1

What is the sum of 74.835 and 2.67 ?

Enter your answer in the box.

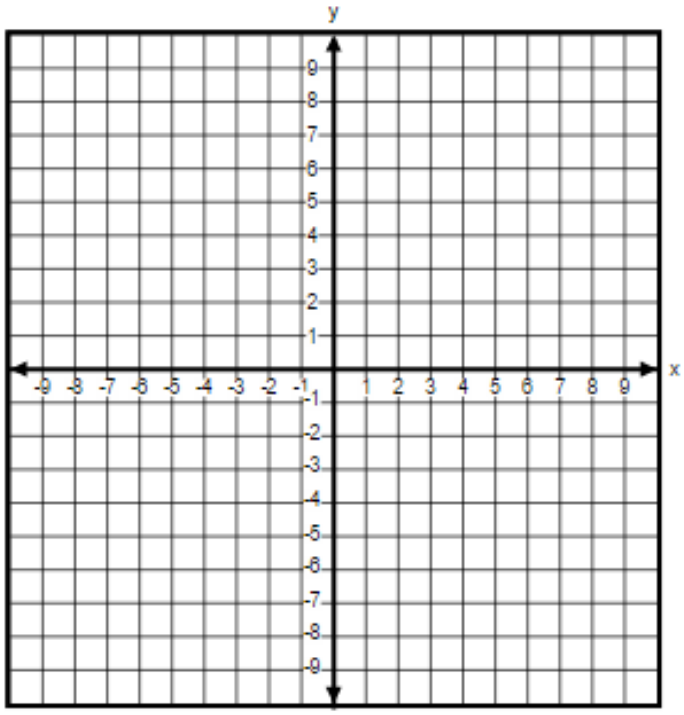
6th Grade PARCC EOY Practice Assessment Item #21: Standard 6.EE.8

Neighborhood Planning

Building	Location
Library	(−4, −6)
School	(5, −6)

In this coordinate grid, the distance between each gridline represents 1 mile. What is the distance between the library and the school on the grid?

You can use the coordinate grid to help you find the answer by plotting the two points. Be sure to place your final answer in the box.



Enter your answer in the box.

miles

6th Grade PARCC EOY Practice Assessment Item #2 (Part 2: Calculator): Standard 6.RP.3b

Chad drove 168 miles in 3 hours.

Part A

How many miles per hour did Chad drive?

Enter your answer in the box.

_____ miles per hour

Part B

Chad will drive 672 more miles. He continues to drive at the same rate.

How many hours will it take Chad to drive the 672 miles?

Enter your answer in the box.

_____ hours

Part C

Chad stopped and filled the car with 11 gallons of gas. He had driven 308 miles using the previous 11 gallons of gas.

How many miles per gallon did Chad's car get?

Enter your answer in the box.

_____ miles per gallon

Part D

Chad's car continues to get the same number of miles per gallon.

How many gallons of gas will Chad's car use to travel 672 miles?

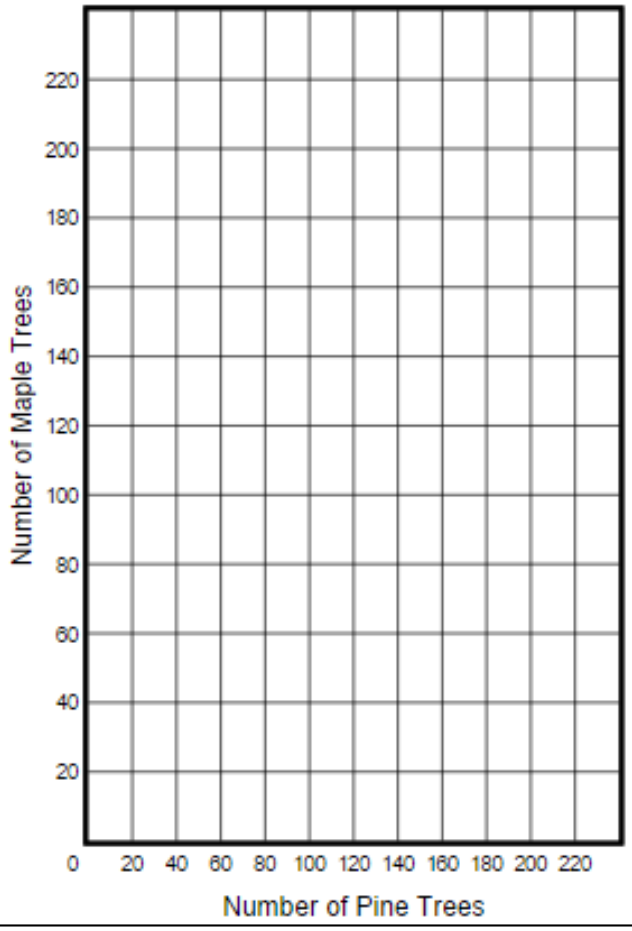
Enter your answer in the box.

_____ gallons

6th Grade PARCC EOY Practice Assessment Item #3 (Part 2: Calculator): Standard 6.RP.3a

A total of 300 trees will be planted in a park. There will be 2 pine trees planted for every 3 maple trees planted.

On the coordinate grid, select the point that represents the number of pine trees planted and the number of maple trees planted.



6th Grade PARCC EOY Practice Assessment Item #4 (Part 2: Calculator): Standard 6.EE.9

A school band performed a concert on four different days. The band sold tickets and snacks each day of the concert for a fundraiser. The first table shows the number of tickets sold and the amount of money collected from ticket sales. The second table shows the number of snacks sold and the amount of money collected from snack sales.

Concert Ticket Sales

Day	Number of Tickets Sold	Amount Collected (dollars)
1	50	275.00
2	47	258.50
3	62	341.00
4	75	412.50

Snack Sales

Day	Number of Snacks Sold	Amount Collected (dollars)
1	43	53.75
2	36	45.00
3	60	75.00
4	65	81.25

Part A

If each snack costs the same price, what is the price per snack?

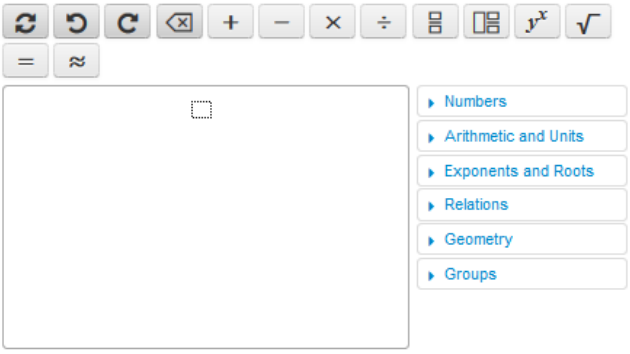
Enter your answer in the box.

$ ____

Part B

Write an equation that can be used to find y, the amount of money collected for selling x concert tickets.

Enter your equation in the box.



6th Grade PARCC EOY Practice Assessment Item #5, (Part 2: Calculator): Standard 6.RP.3b

Shelly biked 21 miles in 4 hours.

Part A

What is Shelly's average speed in miles per hour?

Enter your answer in the box.

Part B

At the same rate, how many hours will it take Shelly to bike 42 miles?

Enter your answer in the box.

6th Grade PARCC EOY Practice Assessment Item #6, (Part 2: Calculator): Standard 6.EE.2a

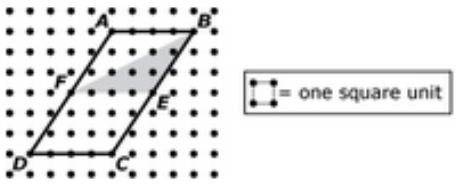
Which of these expressions represents "the sum of 3 and n"?

Select all that apply.

- A. $3n$
- B. $n + 3$
- C. $3 + n$
- D. $n + n + n$
- E. n^3

6th Grade PARCC EOY Practice Assessment Item #7, (Part 2: Calculator): Standard 6.G.1

An advertising company is designing a new logo that consists of a shaded triangle inside a parallelogram.



Part A

What is the area, in square units, of parallelogram $ABCD$?

Enter your answer in the box.

square units

Part B

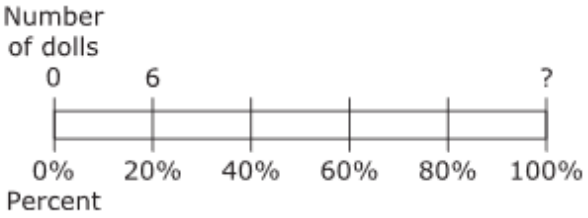
In the new logo, what fraction of the parallelogram is shaded?

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

Numbers
Arithmetic and Units
Exponents and Roots
Relations
Geometry
Groups

6th Grade PARCC EOY Practice Assessment Item #9, (Part 2: Calculator): Standard 6.RP.3c-1

Anita brings 6 dolls to her grandma's house. These dolls represent 20% of Anita's doll collection, as shown in the diagram.

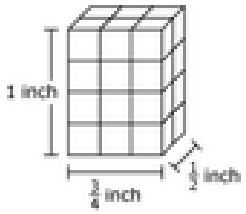


What is the total number of dolls in Anita's doll collection?

Enter your answer in the box.

6th Grade PARCC EOY Practice Assessment Item #10, (Part 2: Calculator): Standard 6.G.2-2

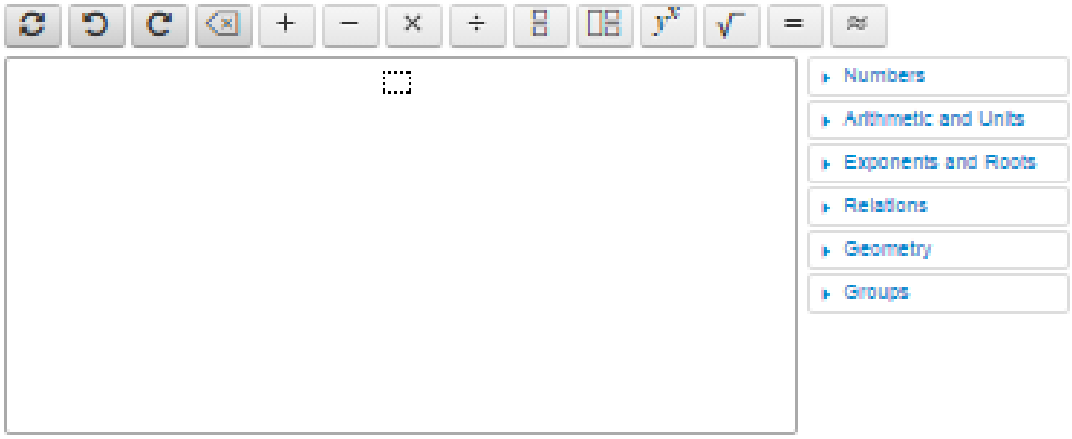
This right rectangular prism is built with small cubes.



Part A

What is the volume, in cubic inch(es), of the right rectangular prism?

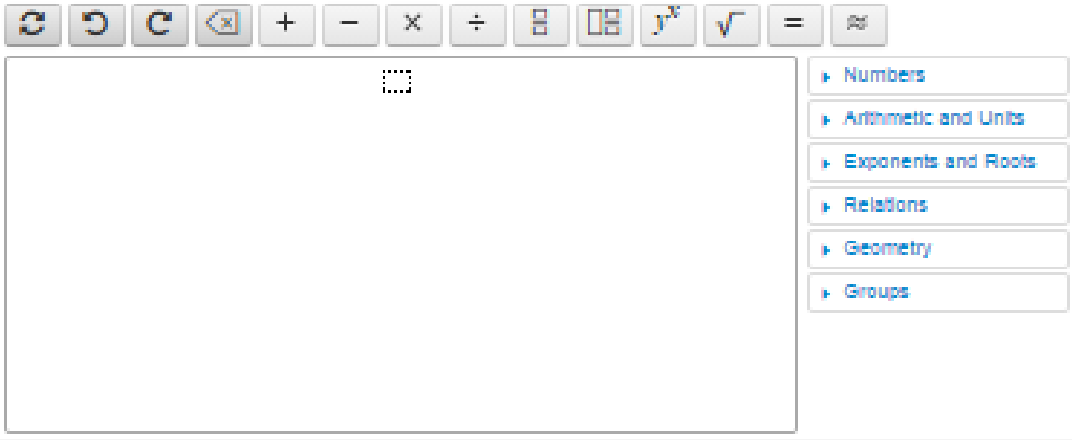
Enter your answer in the space provided. Enter **only** your fraction.



Part B

What is the volume, in cubic inch(es), of 1 of the small cubes?

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



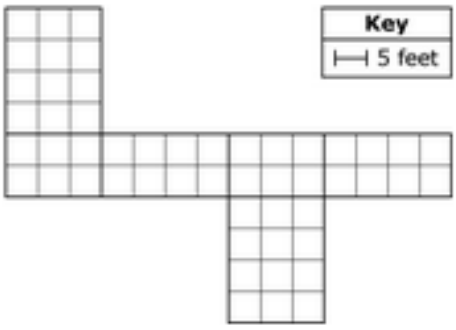
Grade PARCC EOY Practice Assessment Item #11, (Part 2: Calculator): Standard 6.EE.2c-1

What is the value of $a^2 + 3b \div c - 2d$, when $a = 3$, $b = 8$, $c = 2$, and $d = 5$?

Enter your answer in the box.

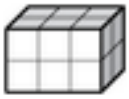
Grade PARCC EOY Practice Assessment Item #12, (Part 2: Calculator): Standard 6.G.4

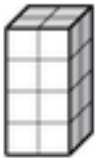
This is a net of a right rectangular prism.

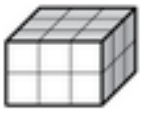


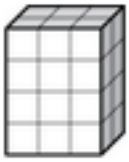
Part A

Which prism can be made using the net?

A. 

B. 

C. 

D. 

Part B

What is the surface area, in square feet, of the prism?

square feet