

Grade 5 - Claim 2

#1

Luke buys a bicycle that is  $\frac{1}{2}$  of the original price.  
The sale price is \$80 less than the original price.  
What is the original price, in dollars, of the bicycle?

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#1 Answer

Answer: 160

Handwritten student work for problem #1. The work shows the following steps:

$$\text{Sale price} = \frac{1}{2} \times \text{original price}$$
$$\text{Sale price} = \text{original price} - \$80$$
$$80 \div \frac{1}{2} = 160$$

A number line is drawn from 0 to 160 with tick marks every 10 units. The numbers 10, 20, 30, 40, 50, 60, 70, 80 are labeled below the line. Vertical dashed lines are drawn at 80 and 160.

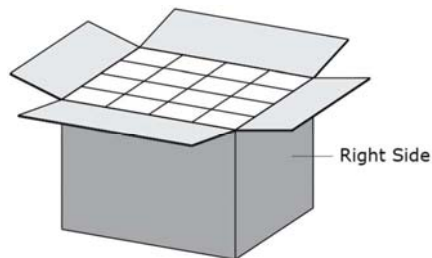
$$\frac{1}{2} \times 160 = \frac{160}{2} = 80 \quad 160 - 80 = 80$$

The final answer, \$160, is boxed.

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#2

A rectangular box is filled with 48 same-sized cubes.  
Julie opens the top of the box and sees 16 cubes.  
Julie closes the top and then opens the right side of  
the box. How many cubes should she see?



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#2 Answer

Answer: 12

Handwritten student work for problem #2. The work shows the following steps:

$$16 \times \boxed{3} = 48$$

rows

$$48 \div 16$$
$$\begin{array}{r} 3 \\ 10 \overline{) 30} \\ +6 \overline{) 18} \\ \hline 48 \end{array}$$

3 rows of 4 blocks

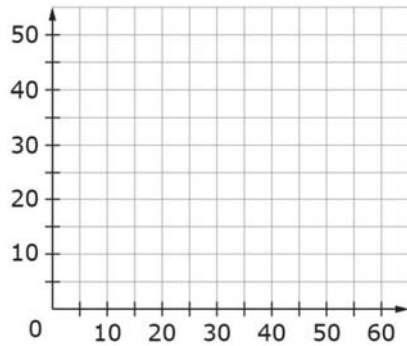
$$3 \times 4$$

12 blocks

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#3

Draw a rectangle with area 1575 square units and one side with length 45 units.

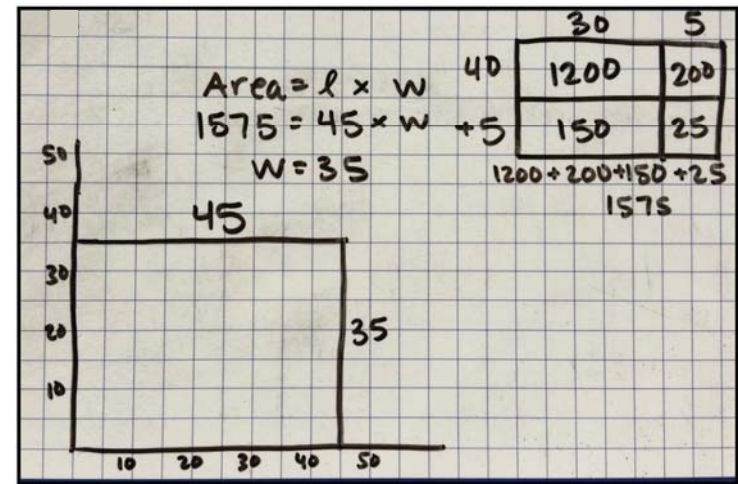


Key  
 ┆ represents 5 units

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#3 Answer

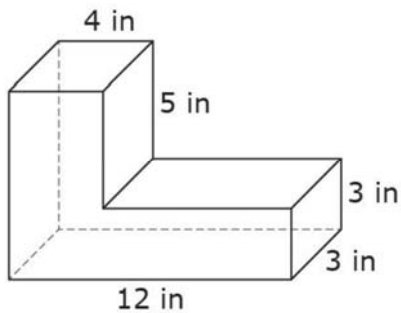
Answer: 45 by 35



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#4

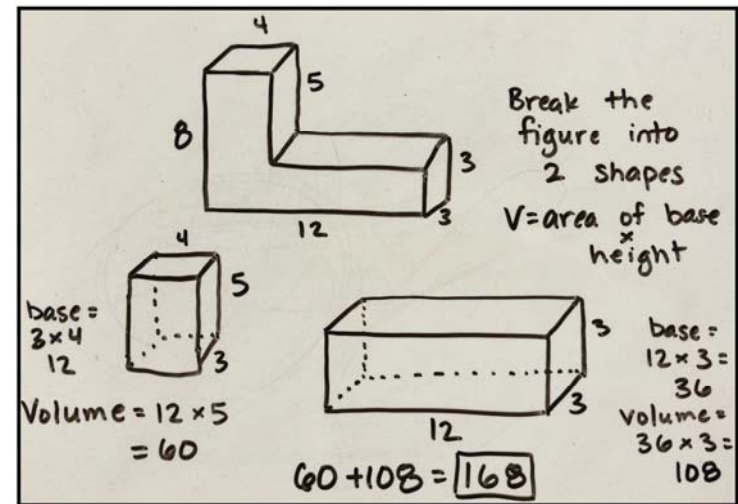
The figure shown was created by joining two rectangular prisms. What is the total volume, in cubic inches, of the figure?



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#4 Answer

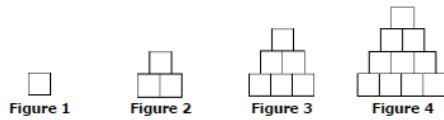
Answer: 168



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#5

The four figures shown represent a sequence.



How many squares would be in figure 5?

Figure 40 in this sequence contains 820 squares. How many squares are needed to make Figure 41?

Figure	Number of Squares
1	1
2	3
3	6
4	10
5	?

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#5 Answer

Answers: 15, 861

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#6

Shelbi builds a platform with wooden boards. Each board is 100 millimeters wide.



Shelbi places the boards side by side to build the platform.



The platform has a total width of 12 meters. What is the fewest number of boards that Shelbi needs to build the platform?

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#6 Answer

Answer: 120