

Frequently missed questions ?

Question

Correct responses

A rectangular garden has a length that is 5 meters more than twice its width. If the perimeter is 64 meters, which equation correctly represents this situation?

8 / 17

Two lines are perpendicular. If one line has a slope of $\frac{3}{5}$, what is the slope of the other line?

7 / 15

A student scores 78, 85, and 92 on three tests. What score is needed on a fourth test to achieve an average of 86?

0 / 16

Which of the following expressions is equivalent to $(2x + 3)^2 - (x - 1)^2$?

7 / 16

A circle has a radius of 6 cm. What is the area of a sector with a central angle of 60° ?

4 / 17

What is the slope of a line that passes through points $(-3, 2)$ and $(5, -4)$?

7 / 17

In a 30-60-90 triangle, if the shortest side is 6, what is the length of the hypotenuse?

2 / 15

What is the solution set for $x^2 - 5x - 14 = 0$?

5 / 16

A rectangular prism has dimensions 4 cm $\times$ 5 cm $\times$ 6 cm. What is its surface area?

2 / 16

A line has equation $y = -2x + 7$. Which line is parallel to it?

7 / 17

If $3^x = 81$, what is the value of x ?

8 / 17

What is the range of the function $f(x) = x^2 + 3$ for all real numbers x ?

7 / 17

A rectangular garden has a length that is 5 meters more than twice its width. If the perimeter is 64 meters, which equation correctly represents this situation?

8 / 17 correct responses

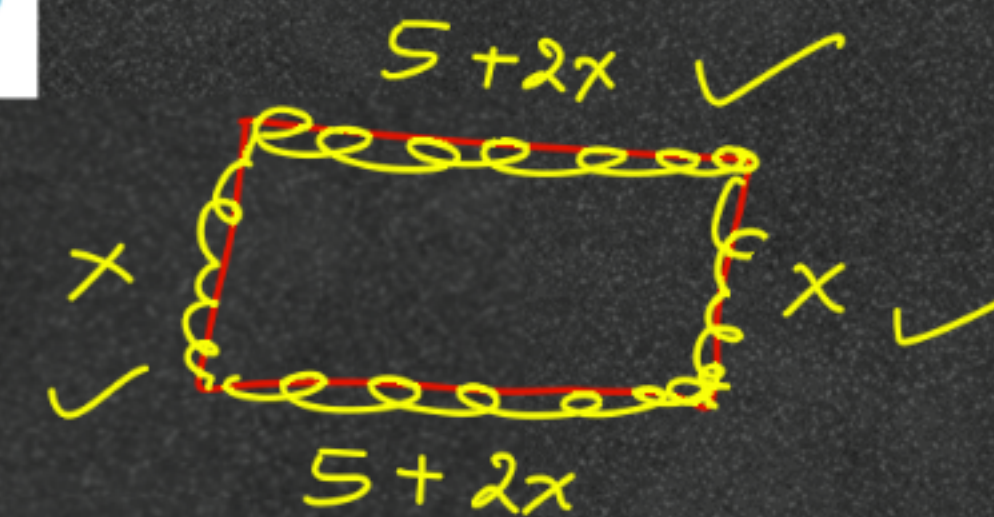
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perimeter = 64
(Total length of boundary)

$$\underline{5 + 2x} \oplus \checkmark x \oplus \underline{5 + 2x} + \checkmark x = 64$$

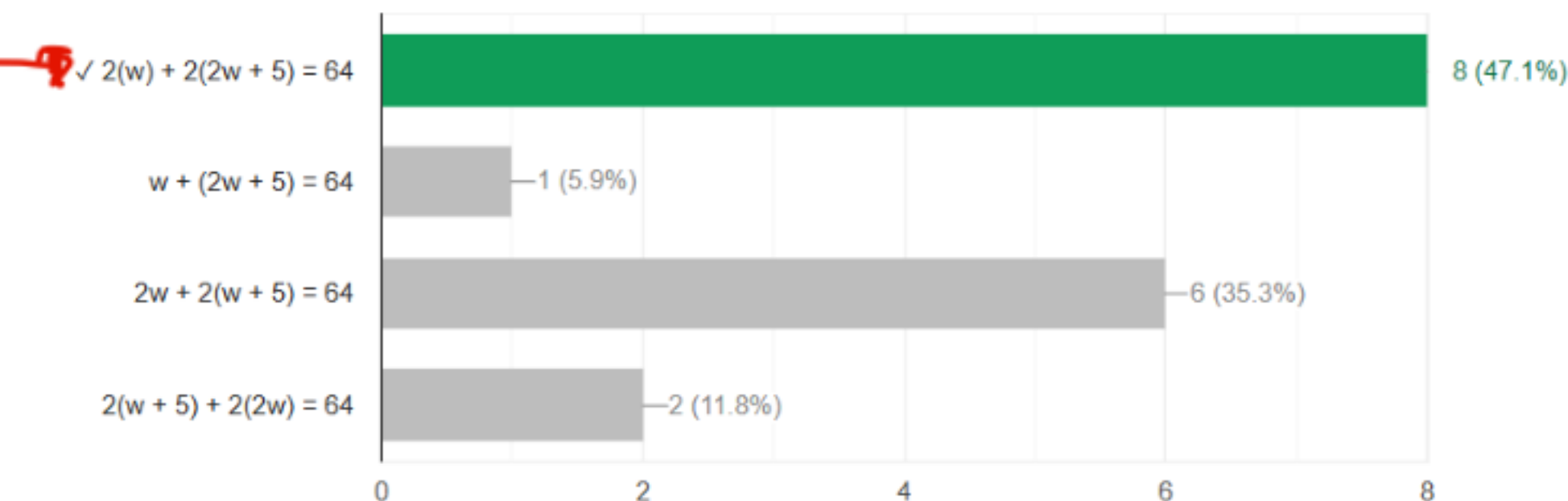
$$\underline{2[5 + 2x] + 2x} = 64$$



A rectangular garden has a length that is 5 meters more than twice its width. If the perimeter is 64 meters, which equation correctly represents this situation?

8 / 17 correct responses

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Two lines are perpendicular. If one line has a slope of $\frac{3}{5}$, what is the slope of the other line?

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7 / 15 correct responses

Example

$y = mx + c$
 $y = 3x + 5$

Slope = 3

$y = 3x + 7$

Slope = 3

If two lines are parallel
then the slopes are same



Negative
Reciprocal

$y = \frac{3}{5}x + 5$

Slope = $\frac{3}{5}$

$y = -\frac{5}{3}x + 7$

Which of the following expressions is equivalent to $(2x + 3)^2 - (x - 1)^2$?

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7 / 16 correct responses

$$\left. \begin{array}{r} 23 \\ 23 \\ \hline 69 \\ \cancel{00} \end{array} \right\}$$

$$\begin{array}{r} 2x+3 \\ 2x+3 \\ \hline 6x+9 \\ 4x^2+6x \cancel{+9} \\ \hline (4x^2+12x+9) \end{array}$$

$$\begin{array}{r} x-1 \\ x-1 \\ \hline -1x+1 \\ x^2-1x \cancel{+1} \\ \hline (x^2-2x+1) \end{array}$$

$3x^2 + 14x + 8$

$$5^2 = 5 \times 5$$
$$7^2 = 7 \times 7$$

$$(2x+3)^2 = \underline{(2x+3)(2x+3)}$$

What is the slope of a line that passes through points $(-3, 2)$ and $(5, -4)$?

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7 / 17 correct responses

✓ ✓ ✓
 x_1, y_1 x_2, y_2

$$\text{Slope} = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\frac{-4 - 2}{5 - (-3)} \dots \frac{-6}{8} \div 2$$

$$\frac{-3}{4} \text{ Answer.}$$

A student scores 78, 85, and 92 on three tests. What score is needed on a fourth test to achieve an average of 86?

0 / 16 correct responses

Average = $\frac{\text{Sum of observations}}{\text{Number of observations}}$

$$= \frac{78 + 85 + 92}{3} \quad 86 = \frac{78 + 85 + 92 + x}{4}$$

$$4(86) = \frac{255 + x}{4}$$

$$\begin{array}{r} 344 = \frac{255}{4} + x \\ -255 \quad -255 \\ \hline 89 = x \quad [\text{Fourth Test}] \end{array}$$

Inverse

#2

pizza slice

A circle has a radius of 6 cm. What is the area of a sector with a central angle of 60° ?

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4 / 17 correct responses



sector [A part of circle]

$$\begin{aligned} \text{Area} &= \pi \cdot \text{Radius}^2 \\ &= \pi 6^2 \\ &= \pi 36 \\ &= \underline{\underline{36\pi}} \end{aligned}$$

$$\begin{aligned} \text{Area} &= \frac{60}{360} \pi \times \text{Radius}^2 \\ &= \frac{60}{360} \times \pi \times 6^2 \\ &= \underline{\underline{6\pi}} \end{aligned}$$



What is the solution set for $x^2 - 5x - 14 = 0$?

5 / 16 correct responses

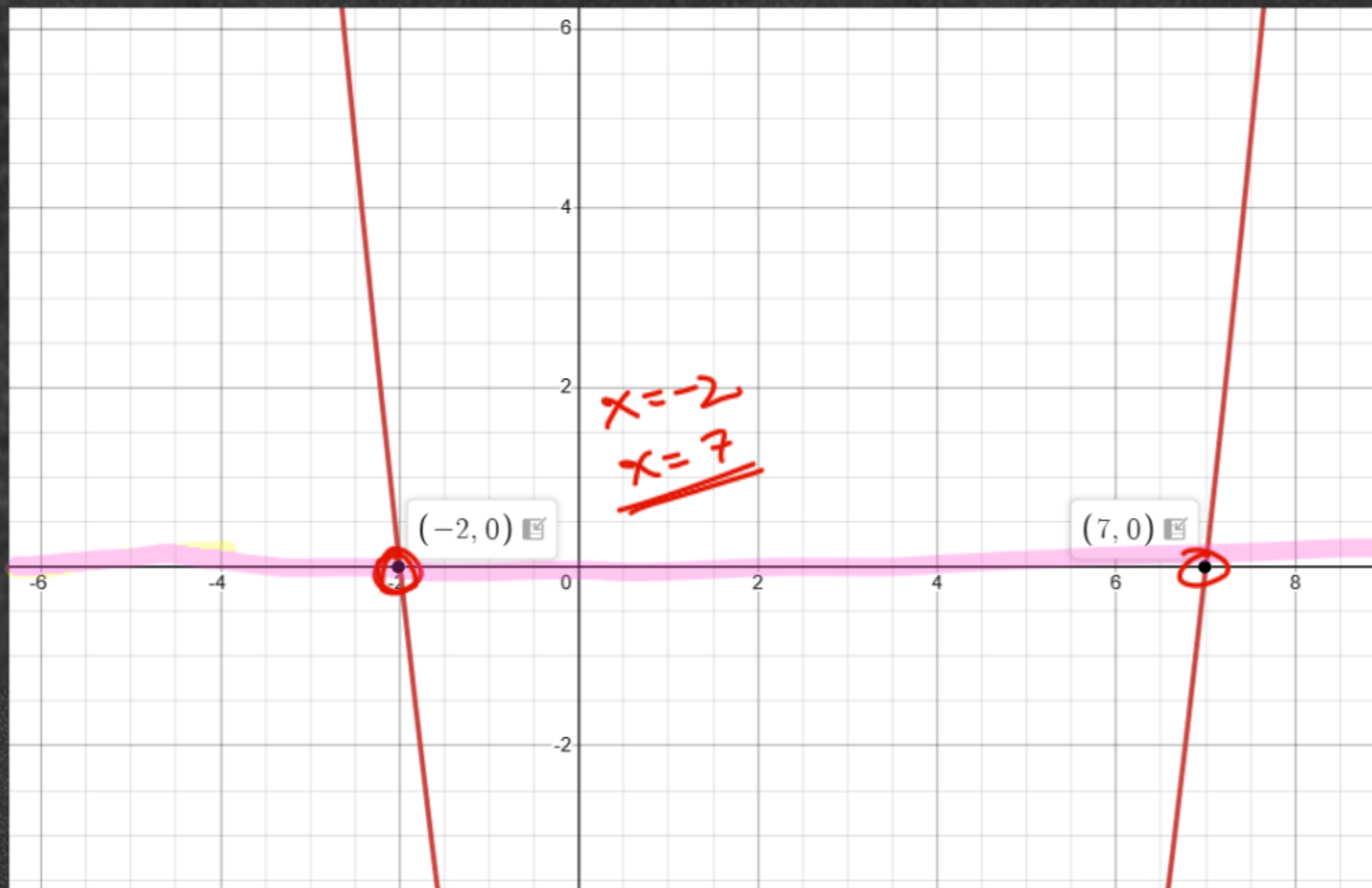
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$x = ?$

factor
 $x^2 - 5x - 14 = 0$

$-14x^2$

DESmos
Graphing

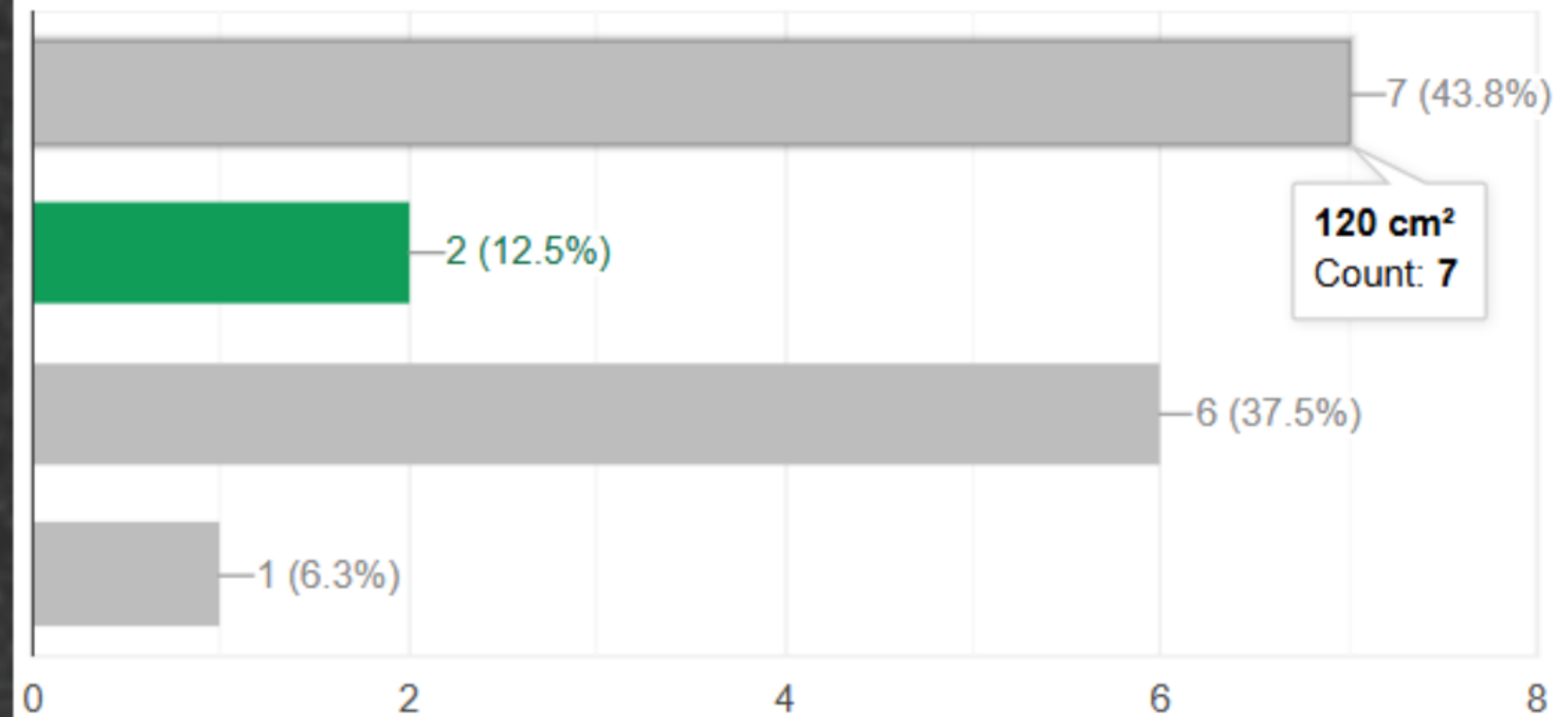


x-axis

A rectangular prism has dimensions 4 cm $\times$ 5 cm $\times$ 6 cm. What is its surface area?

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