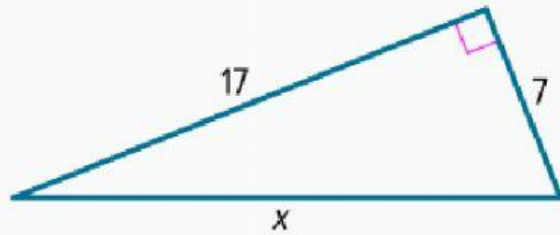




Pythagorean Theorem and Its Converse

Find the value of x .



The side opposite the right angle is the hypotenuse, so $c = x$.

$$a^2 + b^2 = c^2$$

Pythagorean
Theorem

$$17^2 + 7^2 = x^2$$

$a = \square$, $b = \square$, and $c = \square$

$$\square + \square = x^2$$

Simplify.

$$338 = x^2$$

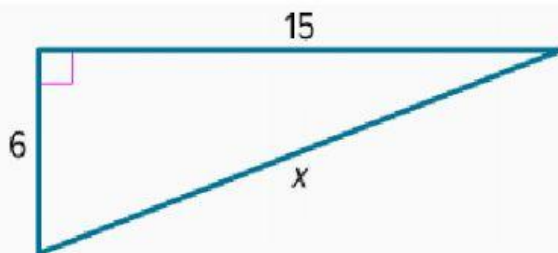
Add.

$$\sqrt{338} = x$$

Take the positive square root of each side.

$$13\sqrt{2} = x$$

Simplify.



Find the value of x .

☐ A $3\sqrt{21}$

☐ B $3\sqrt{29}$

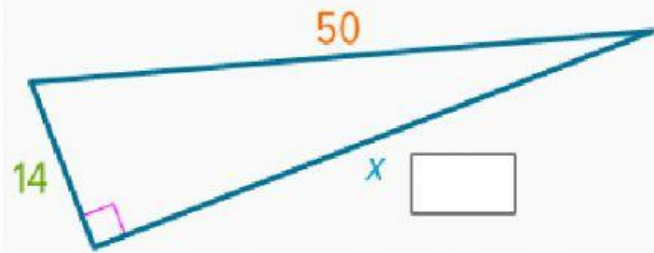
☐ C $9\sqrt{29}$

☐ D $\sqrt{286}$

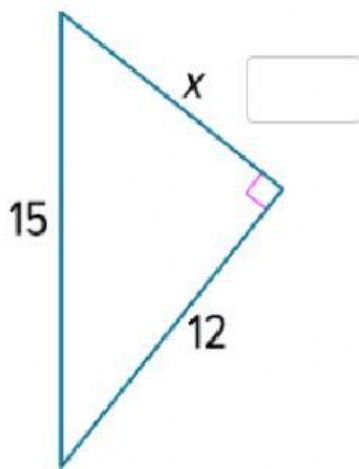
عزيزي الطالب : أولاً اجتهد في فهم ومذاكرة تمارين الكتاب (الكتاب أولاً). تمليني للجميع بالتفوق والتفوق



Use a Pythagorean triple to find the value of x . Explain your reasoning.



Use a Pythagorean triple to find the value of x .



PAINTING Harper is helping her parents paint the window shutters on their house, and she wants to use an 18-foot ladder to reach the windows on the second floor. If Harper places the ladder 4 feet from the base of the house, how high are the windows from the ground?

Part A

Find the exact height of the windows.

- ☐ A $\sqrt{22}$ ft
- ☐ B $2\sqrt{77}$ ft
- ☐ C $4\sqrt{77}$ ft
- ☐ D $2\sqrt{85}$ ft

Part B

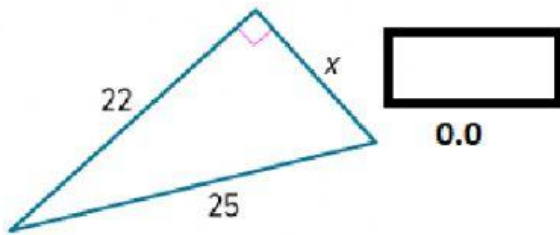
Estimate the height of the windows.

- ☐ A 17.1 ft
- ☐ B 17.5 ft
- ☐ C 18 ft
- ☐ D 18.4 ft

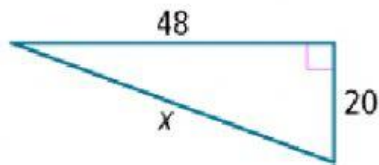
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Find the value of x .



Use a Pythagorean triple to find the value of x .



$x =$

Determine whether the points $J(1, 6)$, $K(3, 2)$, and $L(5, 3)$ can be the vertices of a triangle. If so, classify the triangle as *acute*, *right*, or *obtuse*.

- ☐ A) no
- ☐ B) yes; acute
- ☐ C) yes; right
- ☐ D) yes; obtuse

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