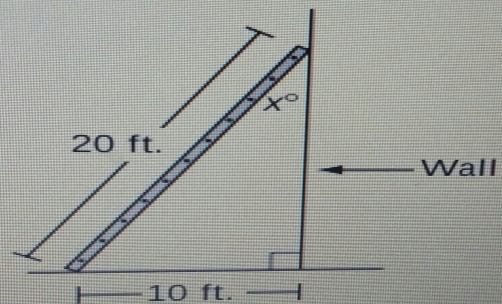


# How do you do this problem?

The diagram below shows a 20-foot ladder leaning against a wall. The bottom of the ladder is 10 feet from the base of the wall.



Based on the dimensions in the diagram, what is the value of  $x$ ?

- A. 15
- B. 30
- C. 45
- D. 60

## Answer 1

Answer: The pythagorean theorem states that  $a^2 + b^2 = c^2$ .

We have  $a = 10$  and  $c = 20$ .

$$100 + b^2 = 400$$

Subtract 100 from each side.

$$b^2 = 300$$

Get the square root of 300.

It could be expressed as  $b \approx 17.321$ , or could stay in radical form as  $\sqrt{300}$ .

Hope this helps!

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