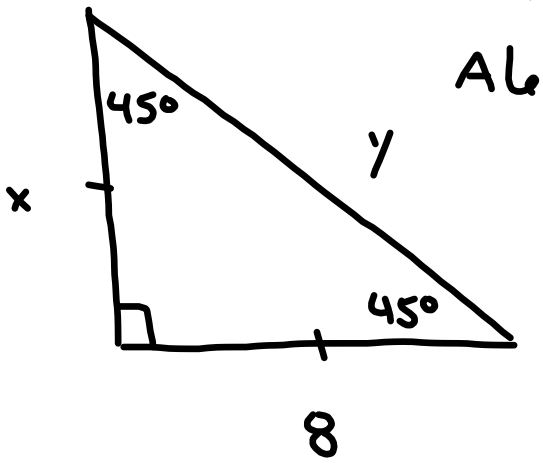
Section 8-3 Special Right Triangles

Obj: use properties of a 45-45-90 and 30-60-90 right triangle

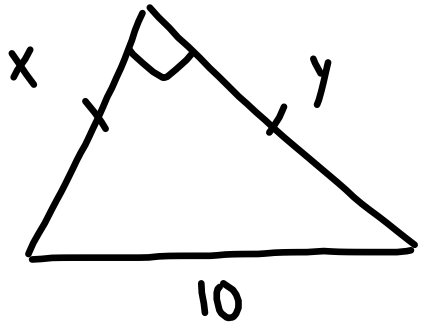
The hypotenuse is equal to a leg times $\sqrt{2}$

A leg is the hypotenuse divided by $\sqrt{2}$.



$x = 8$

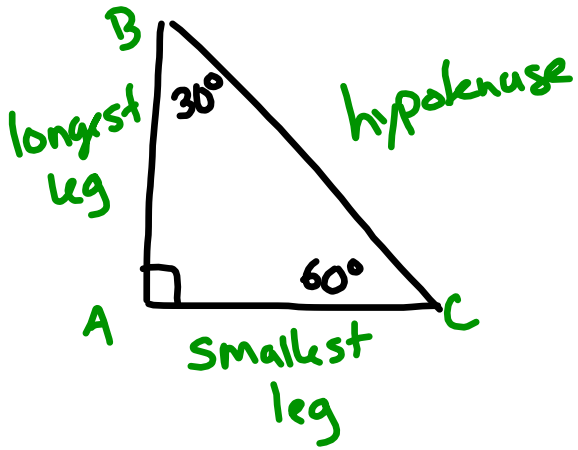
$y = 8\sqrt{2}$



$x = \frac{10}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{10\sqrt{2}}{2} = \frac{2 \cdot 5\sqrt{2}}{2}$

$y = 5\sqrt{2}$

30-60-90



The longest leg is the shortest leg times $\sqrt{3}$

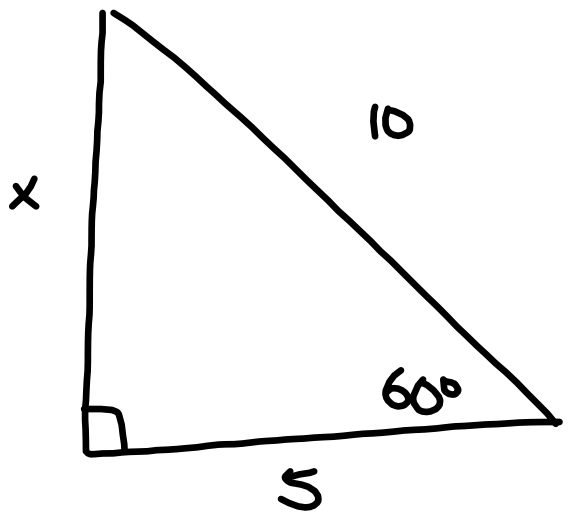
The hypotenuse is the shortest leg time 2.

Longest leg to short leg : LL/$\sqrt{3}$

Longest leg to hypotenuse: LL/$\sqrt{3}$ times 2

Hypotenuse to short leg : Hyp/2

Hypotenuse to long leg : Hyp/2 timos $\sqrt{3}$



$x = 5\sqrt{3}$

$y = 10/2 = 5$

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26-31
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