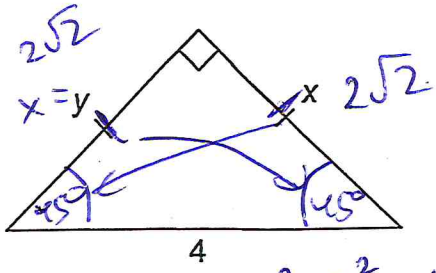
3) $2\sqrt{2}$



$x^2 + x^2 = 4^2$

$\frac{2x^2 = 16}{2}$

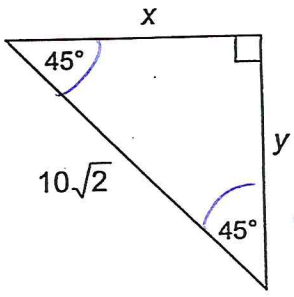
$x^2 = 8$

$\sqrt{\ } \quad \sqrt{\ }$

$x = \sqrt{8} \leftrightarrow 2$

$x = 2\sqrt{2}$

4)



$10 \cdot 10 = 100$

$\sqrt{2} \cdot \sqrt{2} = x^2$

200

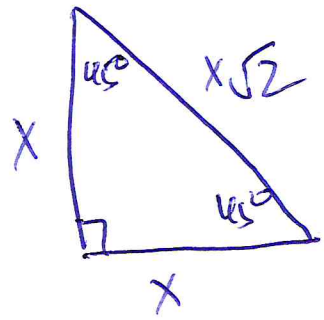
$x^2 + x^2 = (10\sqrt{2})^2$

$\frac{2x^2 = 200}{2}$

$x^2 = 100$

$\sqrt{\ } \quad \sqrt{\ } \quad x = 10$

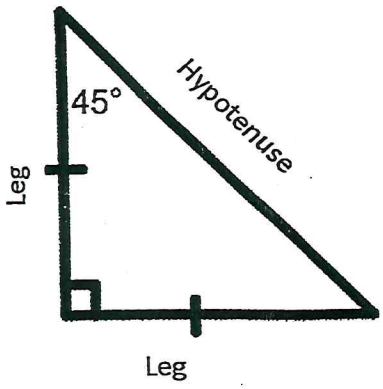
Describe the pattern that you notice between the legs and the hypotenuse of a $45° - 45° - 90°$ triangle.



Model (SAT / ACT) etc

Given on

A right triangle that has angle measures of $45° - 45° - 90°$ is a "special right triangle". There is a pattern that allows us to know the value of the sides of triangles with little to no calculations!



Hypotenuse = $leg \cdot \sqrt{2}$

Leg = $\frac{hypotenuse}{\sqrt{2}}$

} Memorize asap!

***** Fun Facts about the $45° - 45° - 90°$ Triangle *****

- $45°-45°-90°$ $\triangle$'s are also known as isosceles right $\triangle$'s
- 2 legs are $\cong$