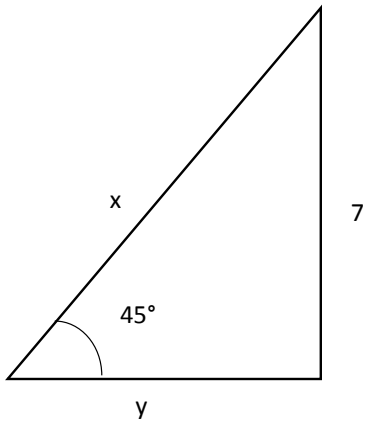
Find the lengths of the missing sides in the triangle. Write your answers as integers or as decimals rounded to the nearest tenth. 7, y, x at 45 degree angle

Solution.



To find the length of the leg y of the right triangle let's use the tangent function for 45° angle

$\tan 45° = \frac{7}{y}$, then $y = \frac{7}{\tan 45°} = \frac{7}{1}$=7.

To find the hypotenuse let's use the Pythagorean theorem:

$x^2 = y^2 + 7^2$

$x = \sqrt{7^2 + 7^2} = \sqrt{98} \approx 9.9$

Answer.

7, 9.9