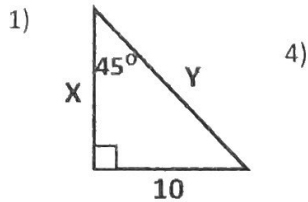


6.6 HW Missing Parts of Right Triangles

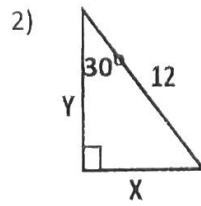
Key

Geometry

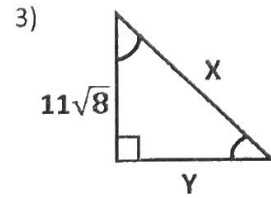
Directions: Find the values of x and y.



$x = 10$
 $y = 10\sqrt{2}$

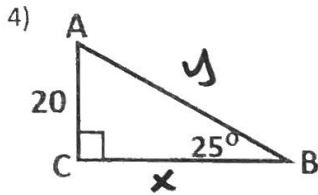


$x = 6$
 $y = 6\sqrt{3}$

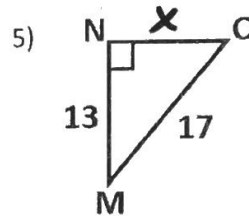


$x = 44$
 $y = 11\sqrt{8}$

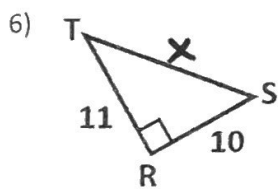
Directions: Find each missing side & angle. Round each side to the nearest tenth & each angle to the nearest degree.



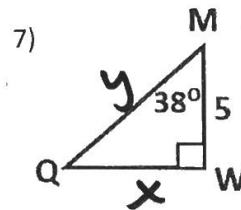
$x \approx 42.9$ $m\angle A \approx 65^\circ$
 $y \approx 47.3$



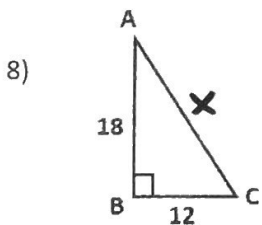
$x \approx 11$
 $m\angle M \approx 40^\circ$
 $m\angle O \approx 50^\circ$



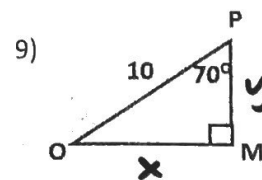
$x \approx 14.9$
 $m\angle T \approx 42^\circ$
 $m\angle S \approx 48^\circ$



$x \approx 3.9$
 $y \approx 6.3$
 $m\angle Q = 52^\circ$



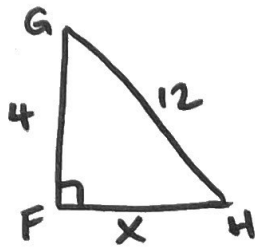
$x \approx 21.6$
 $m\angle A \approx 34^\circ$
 $m\angle C \approx 56^\circ$



$x \approx 9.4$
 $y \approx 3.4$
 $m\angle O = 20^\circ$

Directions: Sketch the figure and then find the missing parts.

- 10) Points F, G, & H are the vertices of a triangle. F is a right angle. $GH = 12$ and $FG = 4$.

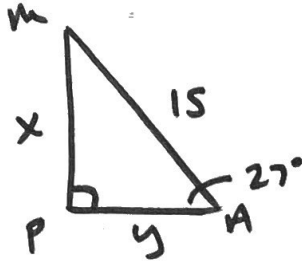


$$x \approx 11.3$$

$$m\angle G \approx 71^\circ$$

$$m\angle H \approx 19^\circ$$

- 11) Points M, A, and P are the vertices of a right triangle. MA is the hypotenuse, and it is 15 units long. Angle A is 27° .

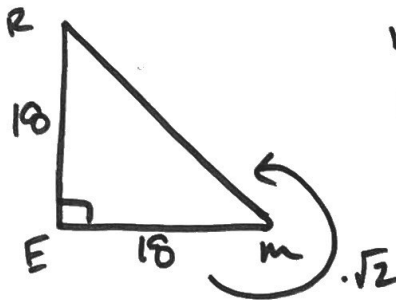


$$x \approx 6.8$$

$$y \approx 13.4$$

$$m\angle M = 63^\circ$$

- 12) Points R, E, and M are points on a right triangle. The legs RE and EM both measure 18 units.

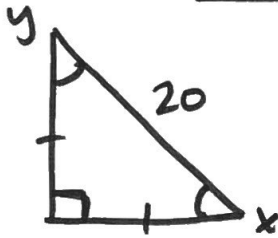


$$m\angle R = 45^\circ$$

$$m\angle M = 45^\circ$$

$$RM \approx 18\sqrt{2} \text{ or } 25.5$$

- 13) In a right triangle, there are two congruent angles. The hypotenuse measures 20 units. Y and X are complementary angles.



$$m\angle X = 45^\circ$$

$$m\angle Y = 45^\circ$$

$$\frac{20}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{20\sqrt{2}}{2} = 10\sqrt{2} \text{ or } 14.14$$

are legs

Draw a picture and answer each question:

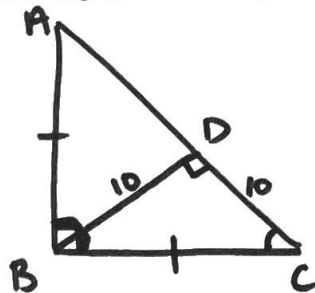
Given: $\triangle ABC$ is an isosceles right triangle; $m\angle B = 90^\circ$; \overline{BD} bisects $\angle ABC$; $BD = 10$

- 14) What is BC?

$$10\sqrt{2}$$

- 16) What is DC?

$$10$$



- 15) What is AB?

$$10\sqrt{2}$$

- 17) What is the perimeter of $\triangle ABC$?

$$10\sqrt{2} + 10\sqrt{2} + 20 =$$

$$20\sqrt{2} + 20$$