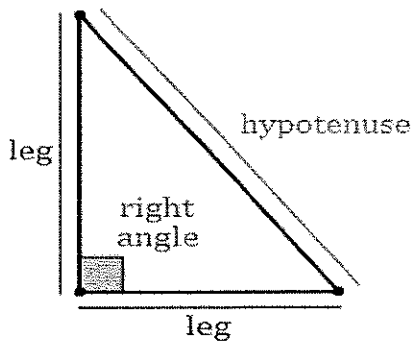


Special Right Triangles

Name: _____

1st

Right Triangle Terminology:



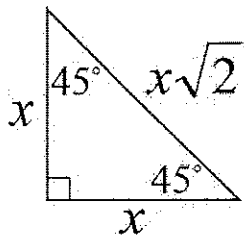
A right triangle is a triangle with a right angle. It has a hypotenuse and two legs.

The hypotenuse is the longest side of a right triangle and is directly across from the right angle.

There are two legs in a right triangle. The right angle is included between these two legs.

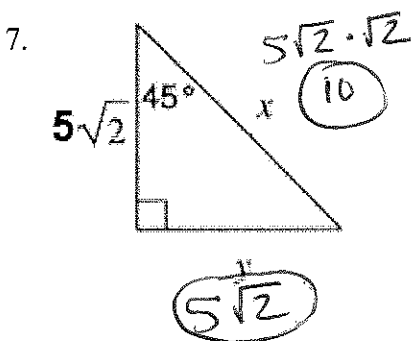
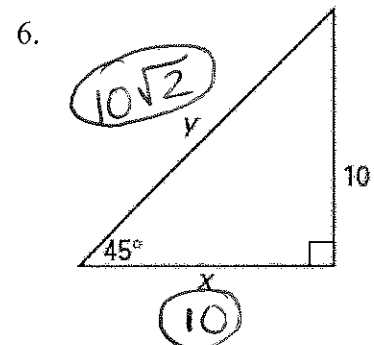
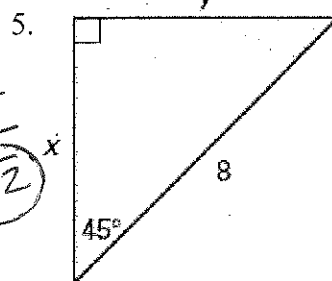
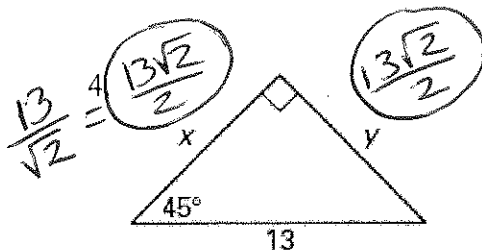
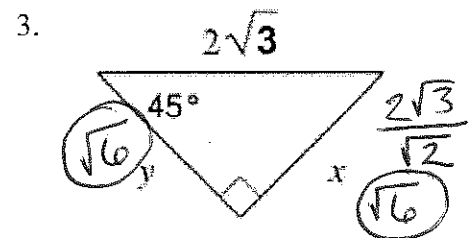
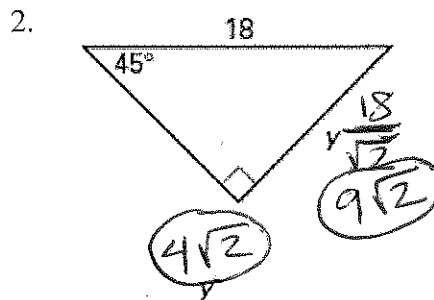
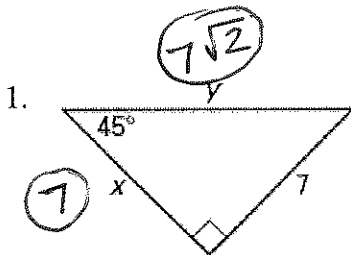
Special Right Triangles: 45° - 45° - 90°

Isosceles Δ - 2 legs are \cong



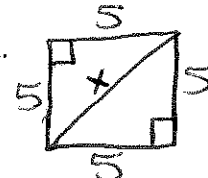
$$\text{Hypotenuse} = \text{Leg} (\sqrt{2})$$

$$\text{Leg} = \frac{\text{Hypotenuse}}{\sqrt{2}}$$



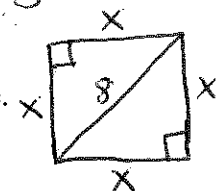
8. The perimeter of a square is 20 cm. Find the length of a diagonal.

$$5\sqrt{2} \text{ cm}$$

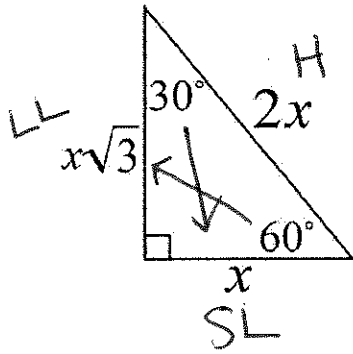


9. The diagonal of a square is 8 in. Find the length of each side of the square.

$$\frac{8}{\sqrt{2}} = 4\sqrt{2} \text{ in}$$



Special Right Triangles: 30° - 60° - 90°



Hypotenuse = 2 (Short Leg)

$$\text{Short Leg} = \frac{\text{Hypotenuse}}{2}$$

$$\text{Long Leg} = \text{Short Leg} (\sqrt{3})$$

$$\text{Short Leg} = \frac{\text{Long Leg}}{\sqrt{3}}$$

* Always start with the short Leg

$$\begin{array}{l} \text{SL/LL} \quad (\sqrt{3}) \\ \text{SL/H} \quad (2) \end{array}$$

