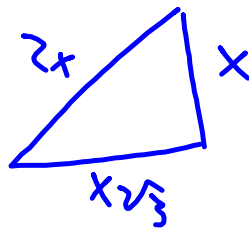
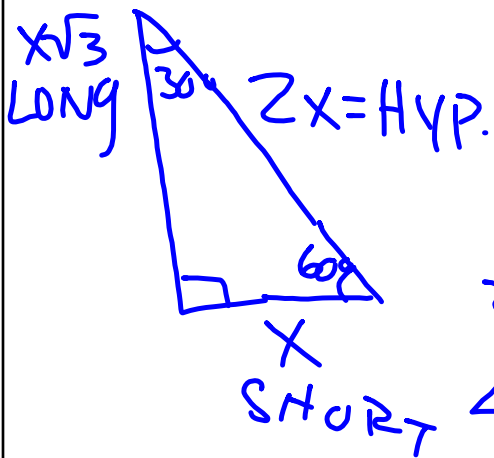


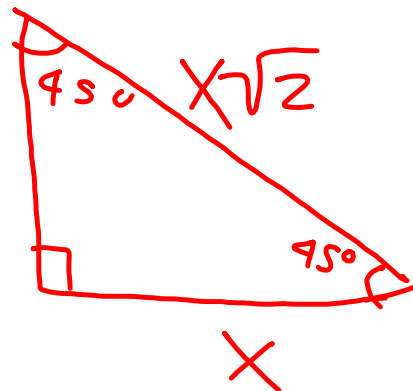
9-3 Special Right Triangles

I know the relationships between sides in special right triangles.
 I can use special right triangles to figure out side lengths.

30-60-90



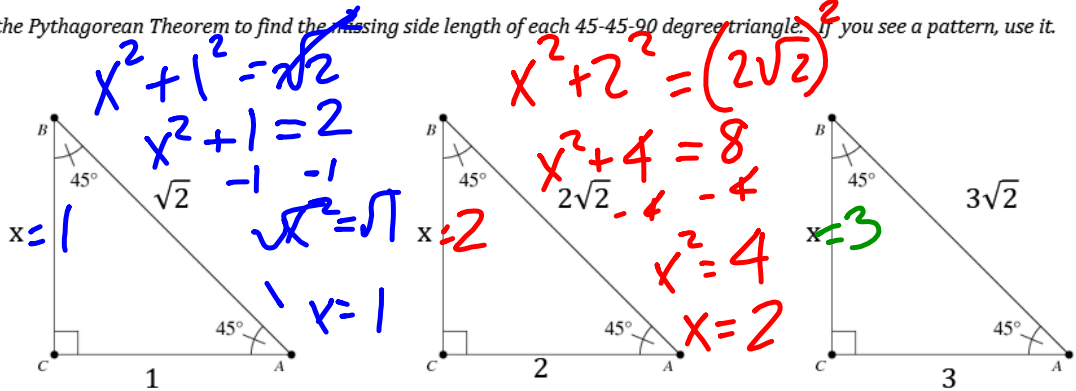
45-45-90



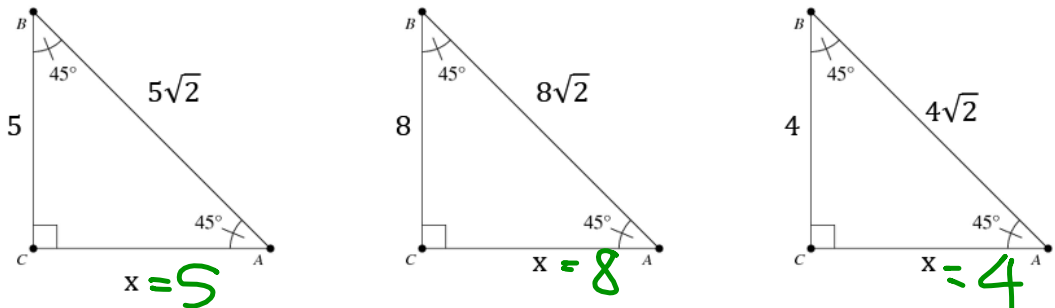
Discovering Special Right Triangles Task

Use the Pythagorean Theorem to find the missing side length of each 45-45-90 degree triangle. If you see a pattern, use it.

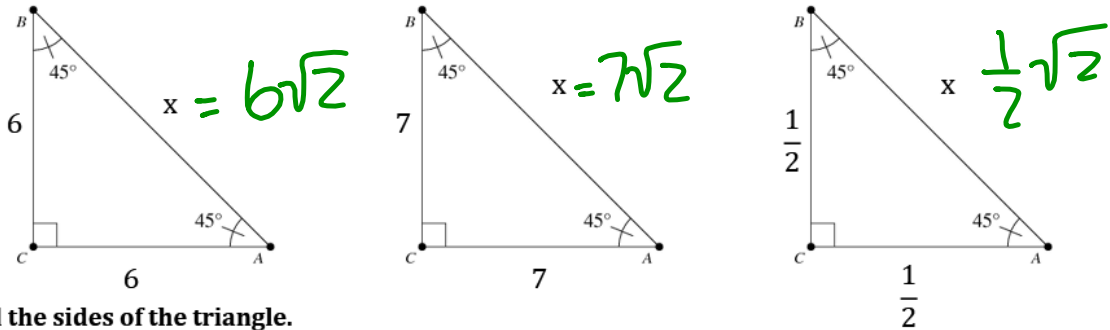
1.



2.

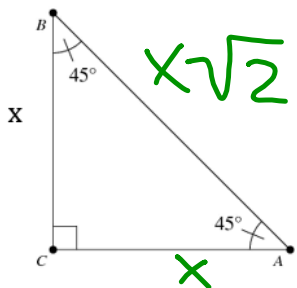


3.



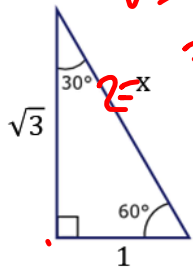
Label the sides of the triangle.

4.

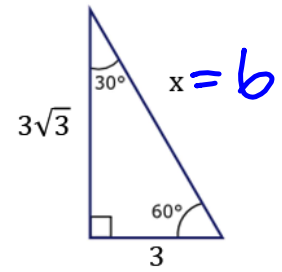
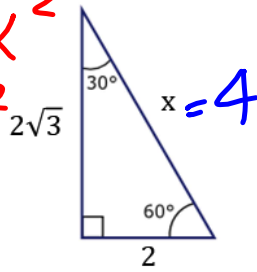


Use the Pythagorean Theorem to find the missing side length of each 30-60-90 degree triangle. If you see a pattern, use it.

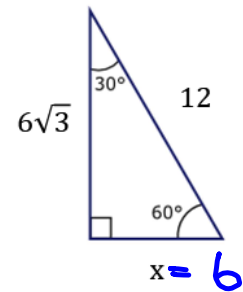
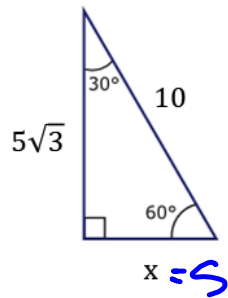
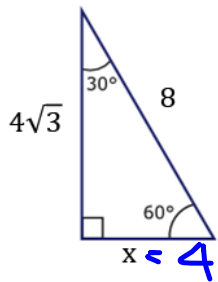
5.



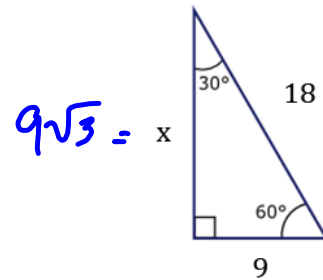
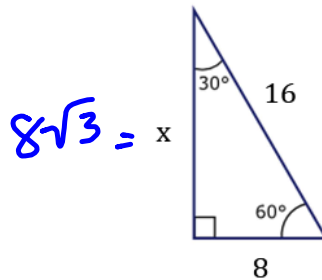
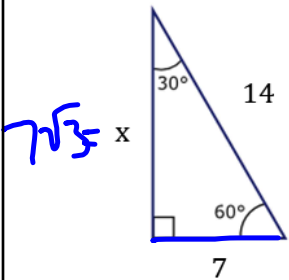
Handwritten red notes:
 $\sqrt{3}^2 + 1^2 = x^2$
 $3 + 1 = x^2$
 $4 = x^2$
 $2 = x$



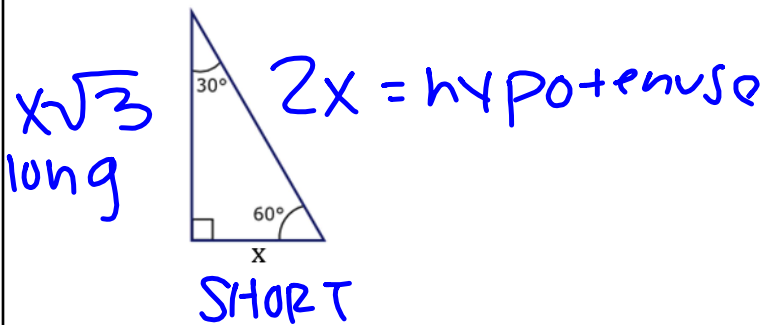
6.



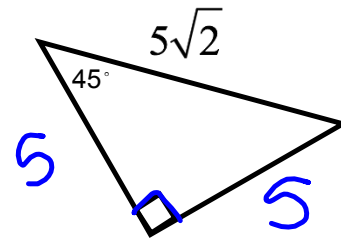
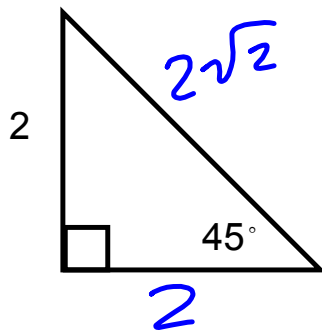
7.



8. Label each side of the triangle.

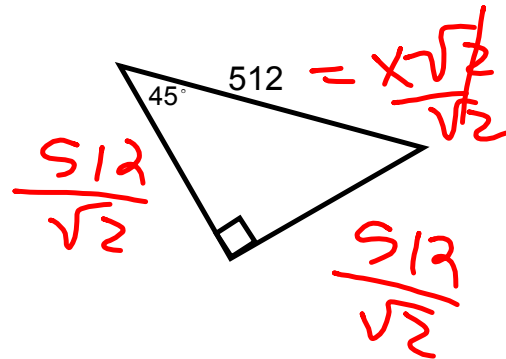
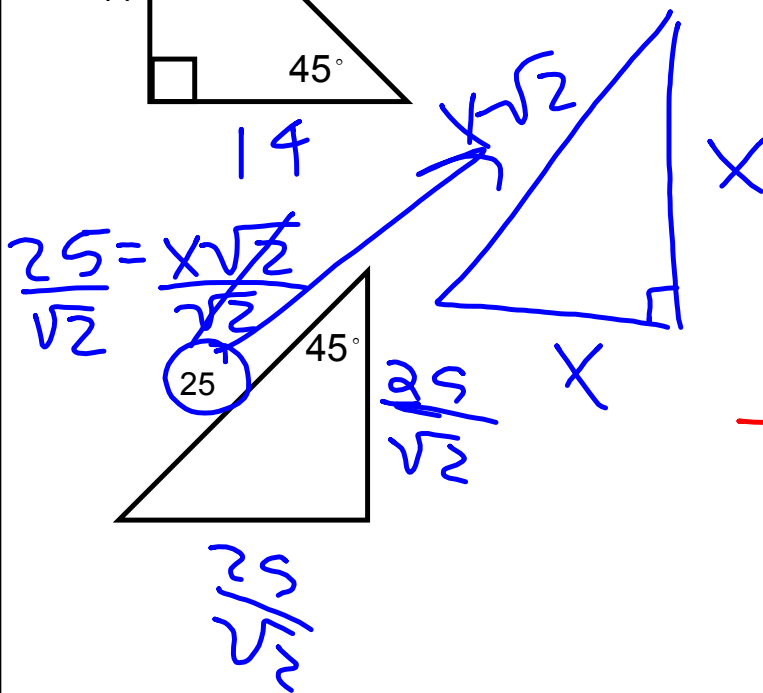
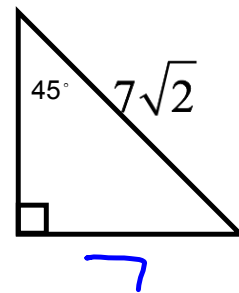
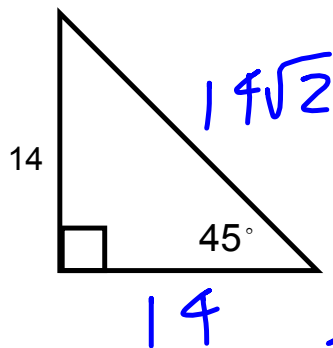


Use the patterns you discovered to find the missing side lengths of each special right triangle.

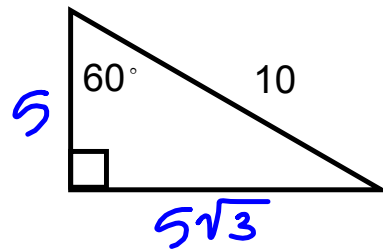
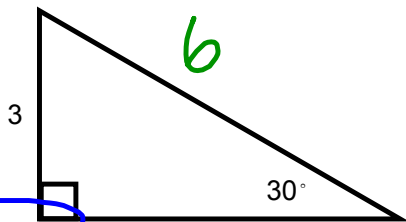


$\frac{2}{\sqrt{2}}$
 $= x\sqrt{2}$
 $2 = x\sqrt{2}$
 $\frac{2}{\sqrt{2}} = \frac{2}{\sqrt{2}}$

Use the patterns you discovered to find the missing side lengths of each special right triangle.



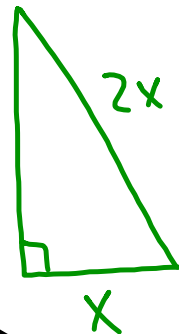
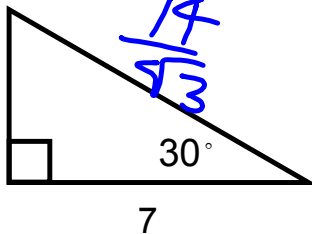
Use the patterns you discovered to find the missing side lengths of each special right triangle.



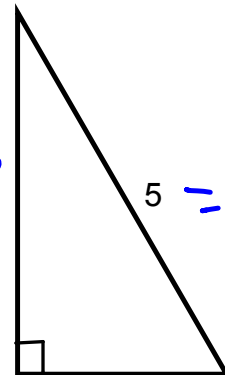
$$\frac{7}{\sqrt{3}} \cdot \frac{2}{1}$$

$$3\sqrt{3}$$

$$\frac{7}{\sqrt{3}}$$



$$2.5\sqrt{3}$$

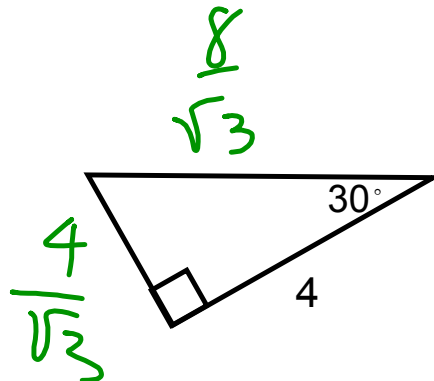
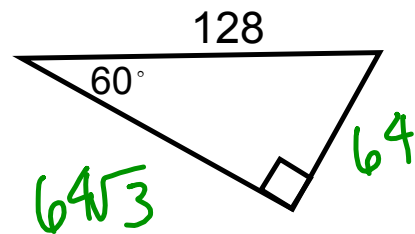
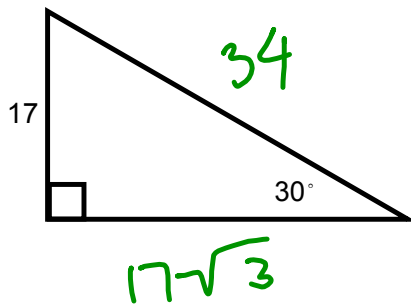


$$5 = 2x$$

$$2.5$$

$$\frac{7}{\sqrt{3}} = x \cdot \frac{2}{\sqrt{3}}$$

Use the patterns you discovered to find the missing side lengths of each special right triangle.



$$4 = x \frac{\sqrt{3}}{\sqrt{3}}$$

$$\frac{4}{\sqrt{3}} = x$$