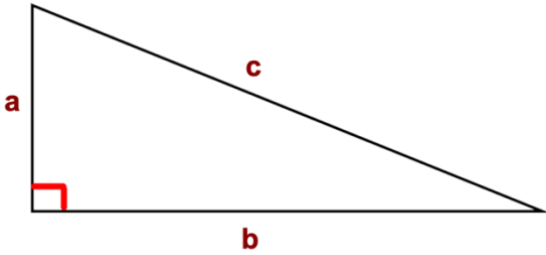
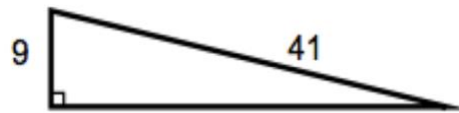
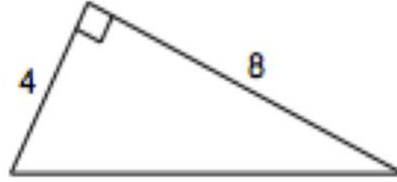


**3.1: Right Triangle Trigonometry Review**

**Pythagorean Theorem**

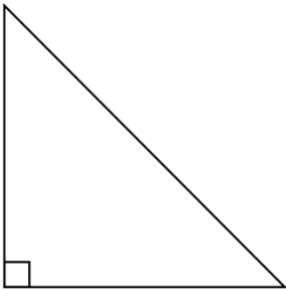


Example) Find the length of the missing side of the triangle.

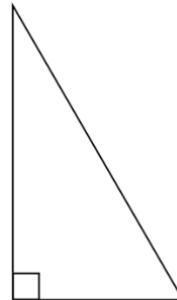


**Special Right Triangles**

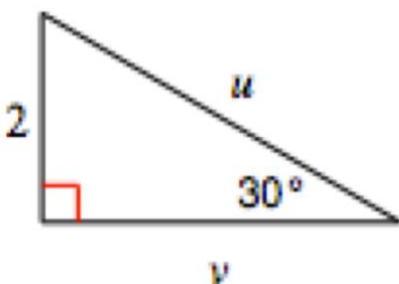
45°-45°-90°



30°-60°-90°

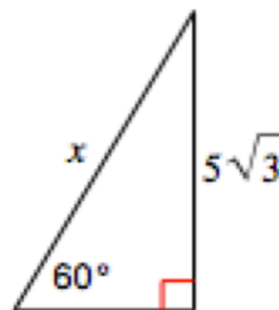


Example) Find the missing lengths of the following triangles.



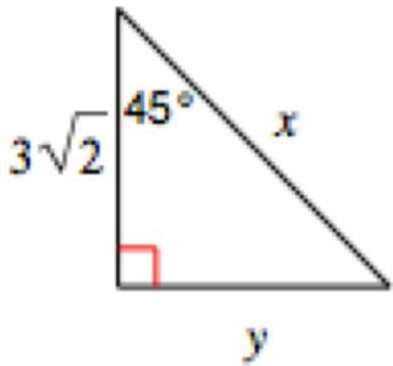
$u =$  \_\_\_\_\_

$v =$  \_\_\_\_\_



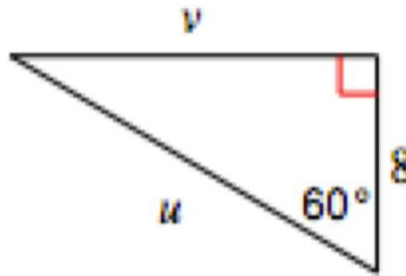
$x =$  \_\_\_\_\_

$y =$  \_\_\_\_\_



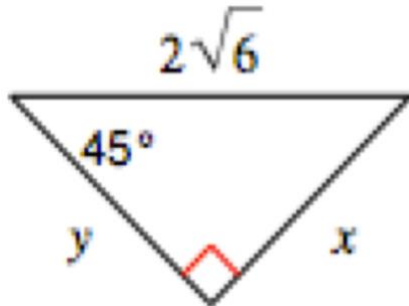
$x = \underline{\hspace{2cm}}$

$y = \underline{\hspace{2cm}}$



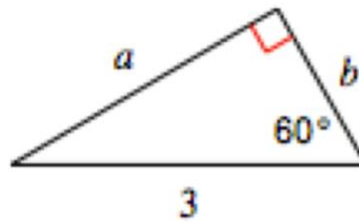
$u = \underline{\hspace{2cm}}$

$v = \underline{\hspace{2cm}}$



$x = \underline{\hspace{2cm}}$

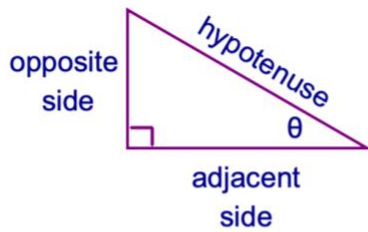
$y = \underline{\hspace{2cm}}$



$a = \underline{\hspace{2cm}}$

$b = \underline{\hspace{2cm}}$

### Trigonometric Functions



Let  $\theta$  be an acute angle of a right triangle. The six trigonometric functions of  $\theta$  are defined as follows:

$\sin \theta =$

$\csc \theta =$

$\cos \theta =$

$\sec \theta =$

$\tan \theta =$

$\cot \theta =$

Ratios of a right triangle's side lengths are used to define the six trigonometric functions:

sine (sin), cosine(cos), tangent (tan)  
 cosecant (csc), secant (sec), and cotangent (cot)

Example) Evaluate the six trig functions using the given right triangle.



Example) In a right triangle,  $\theta$  is an acute angle such that  $\cos(\theta) = \frac{7}{10}$ . What is  $\sin(\theta)$ ?

$\sin(\theta) =$

$\csc(\theta) =$

$\cos(\theta) =$

$\sec(\theta) =$

$\tan(\theta) =$

$\cot(\theta) =$

