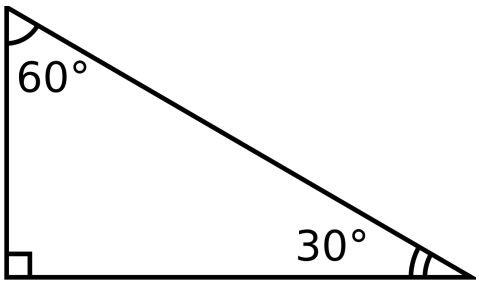
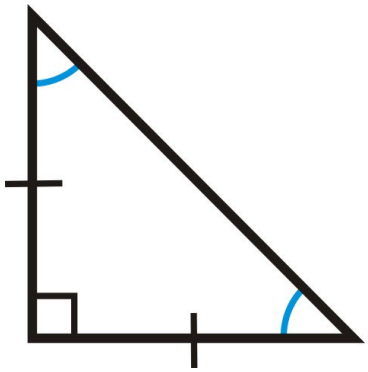
Recall:

1. Fill in the side lengths of the 2 triangles below.

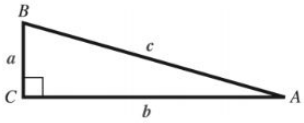




Investigate:

2. What is the value of $\cos(120^\circ)$?

Cofunctions



$\_\_\_\_\_ A = \frac{a}{c} = \_\_\_\_\_ B$

$\_\_\_\_\_ A = \frac{a}{b} = \_\_\_\_\_ B$

$\_\_\_\_\_ A = \frac{c}{b} = \_\_\_\_\_ B$

Cofunction Identities

For any acute angle A, the following hold.

$\sin A =$ $\quad\quad$ $\sec A =$ $\quad\quad$ $\tan A =$

$\cos A =$ $\quad\quad$ $\csc A =$ $\quad\quad$ $\cot A =$

1. Write each function in terms of its cofunction
   a. $\sin 9^\circ$ $\quad$ b. $\cot 76^\circ$ $\quad$ c. $\csc 45^\circ$

Reference Angles:

2. Find the reference angle for each angle:
   a. 294° $\quad$ b. 883°

3. Find the exact value for each expression:
   a. $\sin(-150^\circ)$ $\quad$ b. $\cot 780^\circ$ $\quad$ c. $\cos 270^\circ$

d. $\sin 0^\circ$ e. $\csc 325^\circ$ f. $\tan 240^\circ$

g. $\sin 25^\circ$ h. $\cos(-630^\circ)$ i. $\sec(-180^\circ)$

j. $\sec 210^\circ$ k. $\sec 300^\circ$ l. $\cos(-30^\circ)$

4. Find all values of θ, if θ is in the interval $[0^\circ, 360^\circ)$ and $\sin\theta = -\frac{\sqrt{3}}{2}$

5. Approximate the value of each expression with a calculator:
   a. $\sin 35.8471^\circ$ b. $\sec(-287^\circ)$

6. Find an angle θ in the interval $[0^\circ, 90^\circ)$ that satisfies each condition.
   a. $\cos\theta = 0.92118541$ b. $\cot\theta = 1.4466474$