

### Day 3 – Trig Ratios: Given Info and Cofunctions

Sine and cosine are called **cofunctions** because the value of one ratio for one angle is the same as the value of the other ratio for the other angle. Since the two remaining angles of a right triangle add to  $90^\circ$ , you can use the sine of one acute angle to find the cosine of the other acute angle and vice versa.

#### Sine and Cosine Cofunction Identities

$$\sin \theta = \cos (90^\circ - \theta)$$

$$\cos \theta = \sin (90^\circ - \theta)$$

**Practice:** Determine a value of  $\theta$  for which  $\cos \theta = \sin$  \_\_\_\_\_ is true or  $\sin \theta = \cos$  \_\_\_\_\_ is true.

a.  $\cos 35^\circ = \sin$  \_\_\_\_\_

b.  $\cos 27^\circ = \sin$  \_\_\_\_\_

c.  $\cos 83^\circ = \sin$  \_\_\_\_\_

d.  $\sin 67^\circ = \cos$  \_\_\_\_\_

e.  $\sin 6^\circ = \cos$  \_\_\_\_\_

f.  $\sin 42^\circ = \cos$  \_\_\_\_\_

g.  $\sin x^\circ = \cos$  \_\_\_\_\_

h.  $\cos j^\circ = \sin$  \_\_\_\_\_

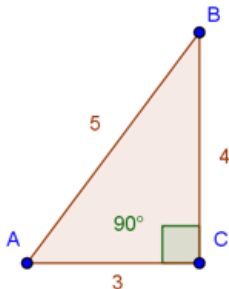
i.  $\sin \beta^\circ = \cos$  \_\_\_\_\_

**Answer the Following:**

a.  $\sin 40^\circ \approx 0.643$ . What is  $\cos 50^\circ$ ?

b. Find  $\sin 28^\circ$  if  $\cos 62^\circ = 0.469$ .

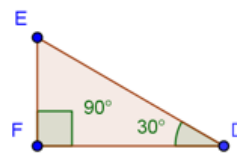
c.



$$\sin A = 4/5 \quad \sin B = \underline{\hspace{2cm}}$$

$$\cos A = 3/5 \quad \cos B = \underline{\hspace{2cm}}$$

d.



$$m\angle E = \underline{\hspace{2cm}}$$

$$\sin D = 0.5000 \quad \sin E = \underline{\hspace{2cm}}$$

$$\cos D = 0.8660 \quad \cos E = \underline{\hspace{2cm}}$$