

Day 5 – 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° , 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 θ for which $\cos \theta = \sin$ _____ is true or $\sin \theta = \cos$ _____ is true.

a. $\cos 35^\circ = \sin$ 55°

b. $\cos 27^\circ = \sin$ 63°

c. $\cos 83^\circ = \sin$ 7°

d. $\sin 67^\circ = \cos$ 23°

e. $\sin 6^\circ = \cos$ 84°

f. $\sin 42^\circ = \cos$ 48°

g. $\sin x^\circ = \cos$ $(90-x)$

h. $\cos j^\circ = \sin$ $(90-j)$

i. $\sin \beta^\circ = \cos$ $(90-\beta)$

Answer the Following:

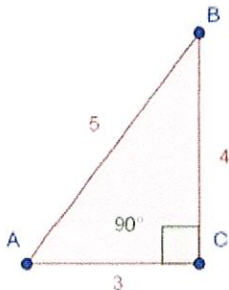
a. $\sin 40^\circ \approx 0.643$. What is $\cos 50^\circ$?

$\cos 50^\circ \approx .643$

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

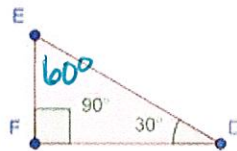
$\sin 28^\circ = .469$

c.



$\sin A = 4/5$ $\sin B =$ $3/5$
 $\cos A = 3/5$ $\cos B =$ $4/5$

d.



$m\angle E =$ 60°
 $\sin D = 0.5000$ $\sin E =$ $.8660$
 $\cos D = 0.8660$ $\cos E =$ $.5000$