

Name: _____

Date: _____

Cofunctions

Cofunction Identities

Recall: If two angles are _____, their sum is _____°. _____
expand upon this concept. The prefix _____ - gives us a hint about cofunctions.

Examples of Cofunctions:

The function of an acute angle is equal to the cofunction of its complement. For example:

$$\sin 10^\circ =$$

$$\tan 76^\circ =$$

$$\sec 22^\circ =$$

Cofunction Identities	
$\sin\theta =$	$\cos\theta =$
$\tan\theta =$	$\cot\theta =$
$\sec\theta =$	$\csc\theta =$

The value of a trig function of an angle equals the value of the **cofunction** of the **complement** of the angle.

For the examples below, write the expression as a function of an acute angle whose measure is less than 45° .

1) $\sin 70^\circ$

2) $\tan 100^\circ$

3) $\csc 410^\circ$

4) $\sin 120^\circ$

5) $\tan 210^\circ$

6) $\sec 145^\circ$

Find the value of x in the examples below:

7) $\sin 20^\circ = \cos x$

8) $\tan (x + 30) = \cot 60^\circ$

9) $\sin x = \cos (x + 10)$

10) $\csc (x - 20) = \sec (x + 30)$

11) $\cot 35^\circ = \tan (x - 5)$

12) $\sec (x + 4) = \csc (2x + 2)$