

## Trig ID #1 Study Guide

Date \_\_\_\_\_ Block \_\_\_\_\_

**Find the values of all six trig functions from the following.**

1)  $\csc \theta = \frac{25}{7}$  and  $0^\circ < \theta < 90^\circ$

$\sin \theta = \underline{\hspace{2cm}}$

$\csc \theta = \underline{\hspace{2cm}}$

$\cos \theta = \underline{\hspace{2cm}}$

$\sec \theta = \underline{\hspace{2cm}}$

$\tan \theta = \underline{\hspace{2cm}}$

$\cot \theta = \underline{\hspace{2cm}}$

2)  $\sin \theta = \frac{9}{41}$  and  $90^\circ < \theta < 180^\circ$

$\sin \theta = \underline{\hspace{2cm}}$

$\csc \theta = \underline{\hspace{2cm}}$

$\cos \theta = \underline{\hspace{2cm}}$

$\sec \theta = \underline{\hspace{2cm}}$

$\tan \theta = \underline{\hspace{2cm}}$

$\cot \theta = \underline{\hspace{2cm}}$

3)  $\tan \theta = -\frac{12}{5}$  and  $270^\circ < \theta < 360^\circ$

$\sin \theta = \underline{\hspace{2cm}}$

$\csc \theta = \underline{\hspace{2cm}}$

$\cos \theta = \underline{\hspace{2cm}}$

$\sec \theta = \underline{\hspace{2cm}}$

$\tan \theta = \underline{\hspace{2cm}}$

$\cot \theta = \underline{\hspace{2cm}}$

4)  $\sec \theta = -\frac{17}{15}$  and  $180^\circ < \theta < 270^\circ$

$\sin \theta = \underline{\hspace{2cm}}$

$\csc \theta = \underline{\hspace{2cm}}$

$\cos \theta = \underline{\hspace{2cm}}$

$\sec \theta = \underline{\hspace{2cm}}$

$\tan \theta = \underline{\hspace{2cm}}$

$\cot \theta = \underline{\hspace{2cm}}$

**Use the angle sum or difference identity to find the exact value of each. Be sure to show your work.**

5)  $\sin 285^\circ$

6)  $\cos 195^\circ$

7)  $\cos -255^\circ$

8)  $\sin -15^\circ$

9)  $\cos 555^\circ$

10)  $\cos 465^\circ$

**Condense the following.**

11)  $\cos 230\cos 10 - \sin 230\sin 10$

12)  $\cos 83\cos 38 + \sin 83\sin 38$

13)  $\sin 27\cos 93 + \cos 27\sin 93$

14)  $\sin 61\cos 16 - \cos 61\sin 16$

**Use the sum or difference identities to find the values. Show your work.**

15) Given  $\sin A = \frac{7}{25}$ , A is in Quadrant I,  $\cos B = -\frac{3}{5}$ , B is in Quadrant II, find

a)  $\cos (A + B) =$

b)  $\sin (A - B) =$

16) Given  $\sec A = -\frac{13}{5}$ , A is in Quadrant III,  $\csc B = -\frac{17}{8}$ , B is in Quadrant IV, find

a)  $\cos (A - B) =$

b)  $\sin (A + B) =$

Use a double-angle to find the exact value of each expression. Show your work.

17)  $\cos \theta = \frac{12}{13}$  and  $0^\circ < \theta < 90^\circ$

$\sin 2\theta =$

$\cos 2\theta =$

$\tan 2\theta =$

18)  $\sin \theta = -\frac{24}{25}$  and  $270^\circ < \theta < 360^\circ$

$\sin 2\theta =$

$\cos 2\theta =$

$\tan 2\theta =$

19)  $\cot \theta = -\frac{9}{40}$  and  $90^\circ < \theta < 180^\circ$

$\sin 2\theta =$

$\cos 2\theta =$

$\tan 2\theta =$

20)  $\sec \theta = -\frac{17}{15}$  and  $180^\circ < \theta < 270^\circ$

$\sin 2\theta =$

$\cos 2\theta =$

$\tan 2\theta =$