

Unit Circle - Unit Review

FALL 2018 _____

Find the value of the trig function indicated.1) Find $\sec \theta$ if $\tan \theta = 2$ and the triangle is in quadrant 3.2) Find $\cot \theta$ if $\sin \theta = -\frac{15}{17}$ and the triangle is in quadrant 4.3) Find the other five trigonometric ratios if $\sin \theta = \frac{\sqrt{2}}{10}$ and the triangle is in quadrant 2.

$\cos \theta =$

$\tan \theta =$

$\cot \theta =$

$\sec \theta =$

$\csc \theta =$

4) Find $\tan \theta$ if $\csc \theta = -\frac{9}{7}$ and the triangle is in quadrant 3.**Solve each equation for $0 \leq \theta < 360$.**

5) $-3 + \sin \theta = \frac{-6 + \sqrt{3}}{2}$

6) $4\cos \theta = -2$

Find the exact value of each trigonometric function.

7) $\csc -\frac{5\pi}{3}$

8) $\cot 150^\circ$

9) $\cos -585^\circ$

10) $\sec 180^\circ$

11) $\sec -\frac{\pi}{2}$

12) $\sec -\frac{2\pi}{3}$

13) $\csc -855^\circ$

14) $\cot -330^\circ$

Find the value of each expression below. Give angles in degrees AND radians.

15) $\sin^{-1} \frac{1}{2}$

16) $\tan^{-1} (-\sqrt{3})$

17) $\tan^{-1} -\frac{\sqrt{3}}{3}$

18) $\tan^{-1} -1$

19) $\cos^{-1} \frac{\sqrt{2}}{2}$

20) $\csc^{-1} (-\sqrt{2})$

Find a positive and a negative coterminal angle for each given angle.

1) -195°

2) 388°

3) $\frac{4\pi}{5}$

4) $\frac{13\pi}{12}$

Find a coterminal angle between 0 and 2π for each given angle.

5) $\frac{51\pi}{10}$

6) $-\frac{146\pi}{45}$

Find the reference angle.

7) $\frac{5\pi}{9}$

8) 220°

9) $\frac{19\pi}{12}$

10) 285°

13) 940°

14) 765°

Convert each radian measure into degrees.

15) $-\frac{17\pi}{9}$

16) $\frac{53\pi}{18}$

17) $\frac{9\pi}{4}$

18) $\frac{17\pi}{9}$

Find the exact value of each using a sum/difference formula.

21) $\cos 165$

22) $\sin 195$

23) $\tan 195$

24) $\sin \frac{17\pi}{12}$

25) $\tan \frac{11\pi}{12}$

26) $\cos \frac{19\pi}{12}$