## Each quiz is worth 9 points.

Quiz 30 Dec 10
Find the exact value of:

1. $\tan ^{-1}(-1)$
2. $\operatorname{Arctan} \sqrt{3}$
3. $\tan ^{-1} 0$

Scores: 9, 9, 9, 9, 9, 9, 9, 9, 6, 6, 6, 6, 6, 6, 6, 6, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 0, 0, 0, 0, 0

## Quiz 29 Dec 8

Find the exact value of:

1. $\cos ^{-1}\left(-\frac{\sqrt{3}}{2}\right)$
2. $\operatorname{Arccos} \frac{1}{2}$
3. $\cos ^{-1}(-1)$

Scores: 9, 9, 9, 9, 9, 6, 6, 6, 6, 6, 6, 6, 3, 3, 3, 3, 3, 3, 3, 3, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0

## Quiz 28 Dec 5

Find the exact value of :

1. $\sin \left[\operatorname{Arcsin}\left(-\frac{\pi}{2}\right)\right] \quad$ 2. $\sin ^{-1}\left(\sin \frac{4 \pi}{3}\right)$

Scores: 8, 6, 5, 4, 3, 3, 3, 3, 3, 3, 2, 2, 2, 2, 2, 2, 2, 2, 1, 1, 1, 1, 1, 0, 0, 0, 0

## Quiz 27 Dec 3

Find the exact value of :

1. $\sin ^{-1} \frac{\sqrt{3}}{2}$
2. $\operatorname{Arcsin} 1$
3. $\sin ^{-1}\left(-\frac{\sqrt{2}}{2}\right)$

Scores: 9, 9, 9, 9, 9, 9, 9, 9, 9, 6, 6, 6, 6, 6, 6, 6, 6, 3, 3, 3, 3, 3, 3, 3, 0, 0, 0, 0, 0, 0, 0

## Quiz 26 Dec 1

Sketch two cycles of the graph of $y=4 \cot \left(x+\frac{2 \pi}{3}\right)$. Label the numbers on the $x$ - and $y$-axes as needed. Label where the cycle begins and ends. Label the numbers in between.
Scores: 9, 9, 9, 9, 9, 8, 7, 7, 7, 7, 6, 5, 4, 4, 4, 3, 3, 3, 3, 3, 2, 2, 2, 2, 1, 1, 1, 1, 0, 0, 0, 0, 0, 0
Quiz 25 Nov 24
Sketch two cycles of the graph of $y=14 \tan (16 \pi x)$. Label the numbers on the $x$ - and $y$-axes as needed. Label where the cycle begins and ends. Label the numbers in between.
Scores: 9, 9, 9, 9, 9, 8, 8, 7, 7, 7, 7, 7, 6, 5, 5, 5, 5, 4, 3, 3, 3, 3, 1, 1, 1, 1, 0, 0, 0

## Quiz 24 Nov 19

Sketch two cycles of the graph of $y=-3 \sec \left(6 x+\frac{5 \pi}{8}\right)$. Label the numbers on the $x$ - and $y$-axes as needed. Only label where each cycle begins and ends. Do not label the numbers in between. Scores: 9, 8, 8, 7, 7, 7, 6, 6, 6, 5, 5, 4, 3, 2, 2, 2, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0

## Quiz 23 Nov 17

Sketch one cycle of the graph of $y=\frac{8}{11} \sin \left(-\frac{15 x}{4}+\frac{5 \pi}{3}\right)$. Label the numbers on the $x$ - and $y$-axes as needed. Label where the cycle begins and ends. Label the numbers in between.
Scores: 9, 8, 8, 8, 7, 6, 6, 6, 5, 5, 5, 5, 5, 4, 4, 4, 3, 3, 3, 3, 3, 3, 3, 2, 2, 2, 2, 1, 1, 1, 1

## Quiz 22 Nov 14

Sketch two cycles of the graph of $y=\sqrt{7} \cos 5 x$. Label the numbers on the $x$ - and $y$-axes.
Scores: 9, 9, 9, 9, 9, 9, 9, 9, 9, 8, 8, 8, 8, 8, 8, 8, 7, 7, 7, 7, 7, 7, 6, 3, 3, 2, 2, 2, 2, 1, 0

## Quiz 21 Nov 12

The angle of depression from the top of a building to an object on the ground below is $48^{\circ}$. If the object is 240 feet from the base of the building, then find the height of the building. Round your answer to the nearest tenth.
Scores: 9, 9, 9, 9, 9, 9, 9, 8, 8, 8, 8, 8, 8, 8, 7, 7, 7, 7, 7, 7, 7, 7, 7, 6, 6, 6, 6, 5, 4, 4, 4, 3, 2, 0
Quiz 20 Nov 7
Solve for $\beta$ and $z$ (Round $z$ to the nearest tenth):

18.3

Scores: 9, 9, 9, 9, 9, 9, 9, 8, 8, 8, 8, 8, 8, 8, 8, 7, 7, 7, 6, 6, 6, 6, 6, 6, 4, 4, 3, 3, 2, 2

## Quiz 19 Nov 5

Approximate the following to four decimal places.

1. $\sec \frac{7 \pi}{29} \quad$ 2. $\tan 475^{\circ} \quad$ 3. $\sin \left(-\frac{15 \pi}{11}\right)$

Scores: 9, 9, 9, 8, 6, 6, 6, 5, 4, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 2, 2, 0, 0, 0, 0, 0, 0

## Quiz 18 Oct 31

If $\cot \beta=-\frac{5}{9}$ and $\sin \beta<0$, then use a right triangle to find the exact value of $\csc \beta$ and $\cos \beta$.
Scores: $9,9,9,8,8,8,8,8,8,8,8,7,7,7,7,6,6,6,5,5,5,5,5,5,5,5,4,4,3,3,3,2,2,1$

## Quiz 17 Oct 29

If $\cos \theta=-\frac{\sqrt{10}}{6}$ and $\theta$ is in the III quadrant, then use a right triangle to find the exact value of $\sin \theta$ and $\cot \theta$.
Scores: $9,8,8,8,8,7,7,7,7,7,7,7,7,7,7,7,6,6,6,6,6,6,5,5,5,5,5,5,4,4,3,3,2,2,0,0$

## Quiz 16 Oct 27

Determine the quadrant that the following angles are in.

1. $\sin \beta<0$ and $\sec \beta>0$ ( 4 pts.)
2. $\csc \alpha>0$ and $\tan \alpha<0$ (5 pts.)

Scores: $9,9,9,9,9,9,9,9,9,9,8,8,8,8,7,7,7,6,6,6,5,5,5,4,4,4,3,3,3,2,2,2,0,0,0,0,0$

## Quiz 15 Oct 22

If $\sin \beta=\frac{\sqrt{15}}{8}$ and $\beta$ is an acute angle, then find the exact value of $\cos \beta$ and $\cot \beta$.
Scores: 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 8, 8, 8, 8, 8, 8, 8, 8, 7, 6, 6, 6, 6, 6, 3, 0
Quiz 14 Oct 17
Given:


Find the exact value of $\sec \theta$ and $\tan \theta$.

Scores: 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 7, 7, 7, 5, 5, 5, 5, 5

## Quiz 13 Oct 15

The terminal side of the angle $\beta$ is in the II quadrant and lies on the line $14 x+8 y=0$. Find the exact value of $1 . \cos \beta \quad 2 . \cot \beta$
Scores: 9, 9, 9, 8, 7, 7, 7, 7, 7, 6, 5, 5, 3, 3, 3, 2, 2, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
NOTE: If you scored less than 9 points on this quiz, you can meet with me to have your score raised to 9 points.

## Quiz 12 Oct 13

Find the exact value of the following: ( 3 pts. each)

1. $\tan 960^{\circ}$
2. $\cot 35 \pi$
3. $\sin \left(-450^{\circ}\right)$

Scores: 9, 9, 9, 9, 8, 7, 7, 7, 7, 7, 6, 6, 6, 6, 5, 5, 5, 5, 5, 4, 4, 4, 4, 3, 3, 2, 2, 1, 1, 1, 1, 0, 0, 0, 0

## Quiz 11 Oct 10

The point $(-3,6)$ is on the terminal side of the angle $\alpha$. Find the exact value of

1. $\sin \alpha$ (5 pts.) 2. $\tan \alpha$ (4 pts.)

Scores: 9, 9, 9, 9, 9, 9, 9, 9, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 6, 6, 5, 5, 4, 4, 3, 1, 1, 0, 0, 0

## Quiz 10 Oct 8

Find the exact value of the following:

1. $\csc \frac{107 \pi}{4}\left(5 \mathrm{pts}\right.$ ) $\quad$ 2. $\cos \left(-\frac{187 \pi}{6}\right)(4 \mathrm{pts})$.

Scores: 9, 9, 9, 9, 9, 9, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 8, 7, 7, 7, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4

## Quiz 9 Oct 3

1. Find the angle between 0 and $2 \pi$ that is coterminal with the angle $\frac{112 \pi}{3}$. ( 5 pts .)
2. Find the angle between $-2 \pi$ and 0 that is coterminal with the angle $-\frac{131 \pi}{9}$. ( 4 pts. )

Scores: 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 9, 8, 8, 8, 7, 7, 7, 7, 7, 6, 6, 6, 6, 5, 3

## Quiz 8 Sept 29

Find the exact value of the following: ( 3 pts. each)

1. $\cos \frac{5 \pi}{4}$
2. $\tan 150^{\circ}$
3. $\csc \left(-\frac{4 \pi}{3}\right)$

Scores: 9, 8, 8, 7, 7, 7, 6, 6, 6, 6, 6, 5, 4, 4, 4, 4, 4, 3, 3, 3, 3, 3, 2, 2, 2, 2, 1, 1, 0, 0, 0, 0, 0, 0, 0
Quiz 7 Sept 26
Find the exact value of the following: (3 pts. each)

1. $\cot \left(-\frac{2 \pi}{3}\right)$
2. $\sec \frac{3 \pi}{4}$
3. $\sin 210^{\circ}$

Scores: $9,8,8,6,6,6,6,5,5,5,5,5,4,4,4,3,3,3,3,3,2,2,2,2,1,0,0,0,0,0,0,0,0$

## Quiz 6 Sept 22

State the location of the following angles. Then find the reference angle for each angle. Show your calculations.

1. $\alpha=\frac{19 \pi}{11} \quad(4 \mathrm{pts}$.
2. $\beta=-220^{\circ}$ (3 pts.)
3. $\gamma=\frac{3 \pi}{2}$ (2 pts.)

Scores: 9, 9, 9, 9, 9, 9, 9, 8, 8, 7, 6, 6, 6, 6, 5, 5, 5, 5, 4, 3, 3, 3, 3, 2, 2, 2, 2, 2, 2, 1, 0, 0, 0, 0, 0, 0, 0

## Quiz 5 Sept 19

Find the exact value of the following: ( 3 pts . each)

1. $\cos 60^{\circ}$
2. $\tan \frac{\pi}{6}$
3. $\csc \frac{\pi}{3}$

Scores: 9, 9, 9, 9, 9, 9, 9, 8, 8, 8, 8, 6, 6, 6, 6, 6, 6, 6, 6, 5, 5, 3, 3, 3, 3, 3, 3, 2, 2, 2, 0, 0, 0, 0, 0, 0, 0

## Quiz 4 Sept 15

Find the exact value of the following: (3 pts. each)

1. $\csc \pi$
2. $\sin \left(-90^{\circ}\right)$
3. $\cot \frac{\pi}{2}$

Scores: 9, 9, 9, 9, 9, 9, 9, 8, 8, 6, 6, 6, 6, 5, 5, 4, 4, 3, 3, 3, 3, 3, 3, 3, 3, 3, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0

## Quiz 3 Sept 12

If a central angle of $50^{\circ}$ intercepts an arc of length 15 feet, then find the radius of the circle.
Scores: 9, 9, 7, 7, 5, 5, 5, 5, 5, 5, 5, 4, 3, 3, 2, 2, 2, 2, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0

## Quiz 2 Sept 10

Convert the following angles to radians if given in degrees or to degrees if given in radians: ( 3 pts . each)

1. $\theta=-\frac{7 \pi}{12}$
2. $\alpha=115^{\circ}$
3. $\beta=3$

Scores: $9,9,9,8,8,8,7,7,7,6,6,6,6,6,5,5,5,5,5,5,5,5,4,4,4,3,3,3,3,3,2,2,1,0,0$
Quiz 1 Sept 8
Determine the location of the following angles: ( 3 pts. each)

1. $\theta=270^{\circ}$
2. $\alpha=-\frac{11 \pi}{7}$
3. $\beta=\frac{15 \pi}{19}$

Scores: 9, 9, 9, 9, 9, 9, 9, 8, 7, 7, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 6, 5, 4, 3, 3, 3, 3, 3, 3, 3, 3, 2, 2, 1, 0

