### Each quiz is worth 9 points.

## Quiz 30 Dec 10

Find the exact value of:

1. 
$$tan^{-1}(-1)$$

2. 
$$Arc \tan \sqrt{3}$$

3. 
$$tan^{-1}0$$

Scores: 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, 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. 
$$Arc \cos \frac{1}{2}$$
 3.  $\cos^{-1}(-1)$ 

3. 
$$\cos^{-1}(-1)$$

Scores: 9, 9, 9, 9, 6, 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

### Ouiz 28 Dec 5

Find the exact value of:

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

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

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. 
$$\sin^{-1} \frac{\sqrt{3}}{2}$$

1. 
$$\sin^{-1}\frac{\sqrt{3}}{2}$$
 2.  $Arc\sin 1$  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, 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, 8, 7, 7, 7, 7, 6, 5, 4, 4, 4, 3, 3, 3, 3, 3, 2, 2, 2, 2, 1, 1, 1, 1, 1, 0, 0, 0, 0, 0, 0

#### Ouiz 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, 8, 8, 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  $y = -3 \sec \left( 6x + \frac{5\pi}{8} \right)$ . 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

#### **Quiz 23 Nov 17**

Sketch one cycle of the graph of  $y = \frac{8}{11} \sin \left( -\frac{15x}{4} + \frac{5\pi}{3} \right)$ . 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, 3, 2, 2, 2, 2, 1, 1, 1, 1

### **Quiz 22 Nov 14**

Sketch two cycles of the graph of  $y = \sqrt{7} \cos 5x$ . 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

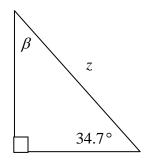
#### **Ouiz 21 Nov 12**

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, 8, 8, 8, 8, 8, 8, 8, 7, 7, 7, 7, 7, 7, 7, 7, 7, 6, 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, 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. 
$$\sec \frac{7\pi}{29}$$

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

## 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, 5, 5, 4, 4, 3, 3, 3, 2, 2, 1

#### **Quiz 17 Oct 29**

If  $\cos \theta = -\frac{\sqrt{10}}{\zeta}$  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, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 6, 6, 6, 6, 6, 6, 6, 5, 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.)

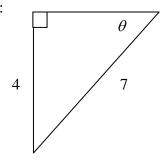
Scores: 9, 9, 9, 9, 9, 9, 9, 9, 9, 8, 8, 8, 8, 7, 7, 7, 6, 6, 6, 5, 5, 5, 4, 4, 4, 3, 3, 3, 2, 2, 2, 0, 0, 0, 0, 0

### Quiz 15 Oct 22

If  $\sin \beta = \frac{\sqrt{15}}{2}$  and  $\beta$  is an acute angle, then find the exact value of  $\cos \beta$  and  $\cot \beta$ .

### **Quiz 14 Oct 17**

Given:



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

## **Ouiz 13 Oct 15**

The terminal side of the angle  $\beta$  is in the II quadrant and lies on the line 14x + 8y = 0. Find the exact value of 1.  $\cos \beta$  2.  $\cot \beta$ 

NOTE: If you scored less than 9 points on this quiz, you can meet with me to have your score raised to 9 points.

## Ouiz 12 Oct 13

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

1. tan 960°

2.  $\cot 35\pi$ 

3.  $\sin(-450^{\circ})$ 

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

#### Ouiz 10 Oct 8

Find the exact value of the following:

1. 
$$\csc \frac{107\pi}{4}$$
 (5 pts.)

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

### 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.)

## 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, 6, 5, 4, 4, 4, 4, 4, 3, 3, 3, 3, 3, 2, 2, 2, 2, 1, 1, 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.  $\sin 210^\circ$ 

2. 
$$\sec \frac{3\pi}{4}$$

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

## Quiz 6 Sept 22

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

1. 
$$\alpha = \frac{19\pi}{11}$$
 (4 pts.)

2. 
$$\beta = -220^{\circ}$$
 (3 pts.)

3. 
$$\gamma = \frac{3\pi}{2}$$
 (2 pts.)

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

# Quiz 5 Sept 19

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

$$2. \tan \frac{\pi}{6} \qquad \qquad 3. \csc \frac{\pi}{3}$$

3. 
$$\csc \frac{\pi}{3}$$

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

# Quiz 4 Sept 15

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

1. 
$$\csc \pi$$

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

3. 
$$\cot \frac{\pi}{2}$$

Scores: 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° 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.  $\beta = 3$ 

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, 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. 
$$\theta = 270^{\circ}$$

$$2. \quad \alpha = -\frac{11\pi}{7}$$

3. 
$$\beta = \frac{15\pi}{19}$$