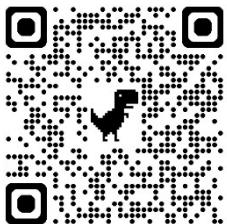


Name _____
Mr. Schlansky

Date _____
Algebra II



Advanced Trig Ratios

1. If $\cos \theta = \frac{12}{13}$ and θ is in Quadrant I, find:

- a) $\cos \theta$ b) $\sin \theta$ c) $\tan \theta$

- d) $\sec \theta$ e) $\csc \theta$ f) $\cot \theta$

2. If $\sin \theta = -\frac{3}{5}$ and θ is in Quadrant III, find:

- a) $\cos \theta$ b) $\sin \theta$ c) $\tan \theta$

- d) $\sec \theta$ e) $\csc \theta$ f) $\cot \theta$

3. If $\tan \theta = \frac{24}{7}$ and θ is in Quadrant III, find:

- a) $\cos \theta$ b) $\sin \theta$ c) $\tan \theta$

- d) $\sec \theta$ e) $\csc \theta$ f) $\cot \theta$

4. If $\sin \theta = \frac{5}{8}$ and θ is in Quadrant II, find:

- a) $\cos \theta$ b) $\sin \theta$ c) $\tan \theta$

- d) $\sec \theta$ e) $\csc \theta$ f) $\cot \theta$

5. Angle θ is in standard position and $(3, 4)$ is a point on the terminal side of θ . Find:

a) $\cos \theta$ b) $\sin \theta$ c) $\tan \theta$

d) $\sec \theta$ e) $\csc \theta$ f) $\cot \theta$

6. Angle θ is in standard position and $(4, -7)$ is a point on the terminal side of θ . Find:

a) $\cos \theta$ b) $\sin \theta$ c) $\tan \theta$

d) $\sec \theta$ e) $\csc \theta$ f) $\cot \theta$

7. Angle θ is in standard position and $(-5, -12)$ is a point on the terminal side of θ . Find:

a) $\cos \theta$ b) $\sin \theta$ c) $\tan \theta$

d) $\sec \theta$ e) $\csc \theta$ f) $\cot \theta$

8. Angle θ is in standard position and $(-2, 3)$ is a point on the terminal side of θ . Find:

a) $\cos \theta$ b) $\sin \theta$ c) $\tan \theta$

d) $\sec \theta$ e) $\csc \theta$ f) $\cot \theta$

9. A circle centered at the origin has a radius of 10 units. The terminal side of an angle, θ , intercepts the circle in Quadrant I at point C . The y -coordinate of point C is 8. Find:

a) $\cos \theta$ b) $\sin \theta$ c) $\tan \theta$

d) $\sec \theta$ e) $\csc \theta$ f) $\cot \theta$

10. A circle centered at the origin has a radius of 4 units. The terminal side of an angle, θ , intercepts the circle in Quadrant II at point P . The x -coordinate of point P is 2. Find:

a) $\cos \theta$ b) $\sin \theta$ c) $\tan \theta$

d) $\sec \theta$ e) $\csc \theta$ f) $\cot \theta$

11. A circle centered at the origin has a radius of 6 units. The terminal side of an angle, θ , intercepts the circle in Quadrant VI at point P . The x -coordinate of point P is 2. Find:

a) $\cos \theta$ b) $\sin \theta$ c) $\tan \theta$

d) $\sec \theta$ e) $\csc \theta$ f) $\cot \theta$

12. A circle centered at the origin has a radius of 9 units. The terminal side of an angle, θ , intercepts the circle in Quadrant II at point P . The x -coordinate of point P is 7. Find:

a) $\cos \theta$ b) $\sin \theta$ c) $\tan \theta$

d) $\sec \theta$ e) $\csc \theta$ f) $\cot \theta$

13. The point $\left(\frac{3}{5}, -\frac{4}{5}\right)$ lies on the unit circle. Find:

a) $\cos \theta$ b) $\sin \theta$ c) $\tan \theta$

d) $\sec \theta$ e) $\csc \theta$ f) $\cot \theta$

14. The point $\left(x, -\frac{2}{3}\right)$ lies on the unit circle where $x > 0$. Find:

a) $\cos \theta$ b) $\sin \theta$ c) $\tan \theta$

d) $\sec \theta$ e) $\csc \theta$ f) $\cot \theta$