

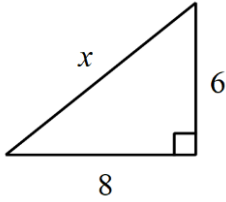
6.6

Name _____ Date _____ Period _____

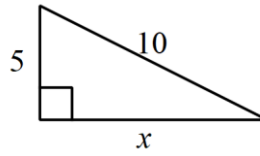
Trigonometric Functions

Find the missing side of each triangle. Leave your answers in simplest radical form when necessary.

1.

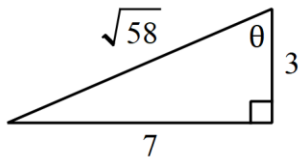


2.

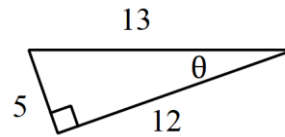


Find the value of the trigonometric function indicated. Leave as a ratio in simplest form.

3. $\sin \theta$

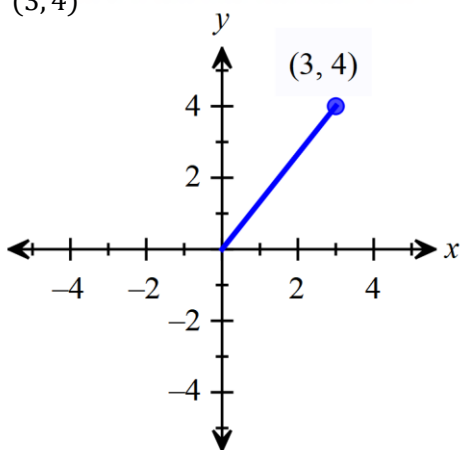


4. $\tan \theta$



Find the exact values of $\sin \theta$, $\cos \theta$, $\tan \theta$, $\csc \theta$, $\sec \theta$, and $\cot \theta$ where θ is an angle in standard position whose terminal side contains the given point. Write answers in simplest form.

5. (3, 4)



$\sin \theta =$ _____

$\csc \theta =$ _____

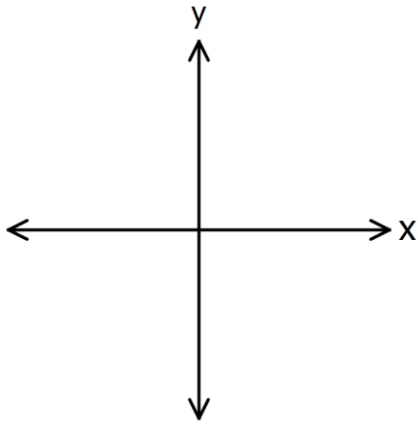
$\cos \theta =$ _____

$\sec \theta =$ _____

$\tan \theta =$ _____

$\cot \theta =$ _____

6. $(-9, 5)$



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

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

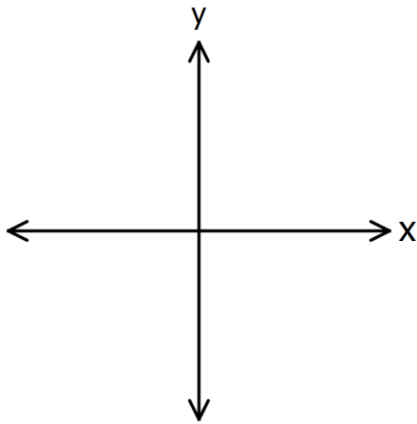
$$\cos \theta = \underline{\hspace{2cm}}$$

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

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

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

7. $(-3, -2)$



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

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

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

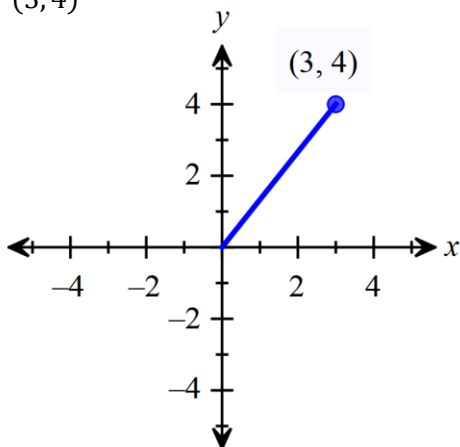
$$\sec \theta = \underline{\hspace{2cm}}$$

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

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

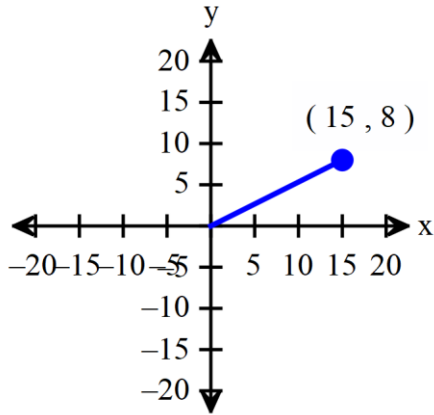
Find the degree of the angle (round to the nearest tenth of a degree), in standard position, whose terminal side contains the given point.

8. $(3, 4)$



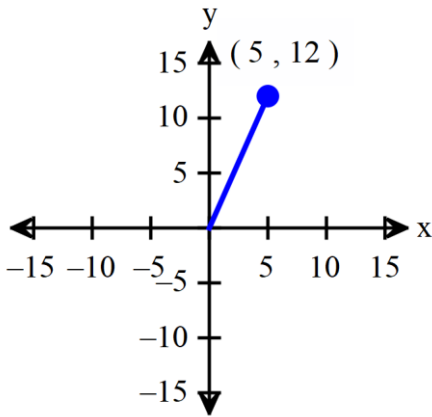
$$\theta = \underline{\hspace{2cm}}$$

9. (15,8)



$\theta =$ _____

10. (5,12)



$\theta =$ _____

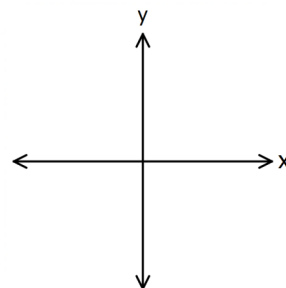
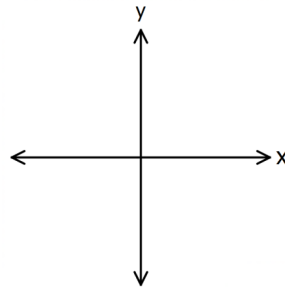
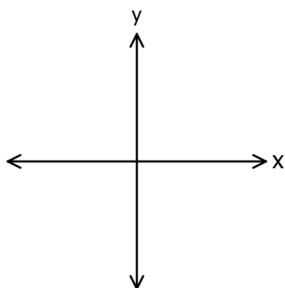
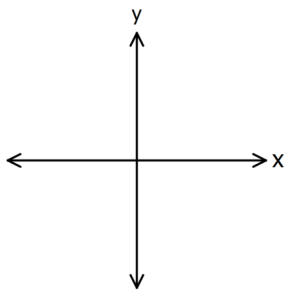
Draw the two triangles for the trig functions and find the coordinates that go with it. There will be 2 answers. Leave answers in simplest radical form. (Remember All Students Take Calculus).

11. $\sin \theta = \frac{3}{5}$

12. $\tan \theta = \frac{4}{7}$

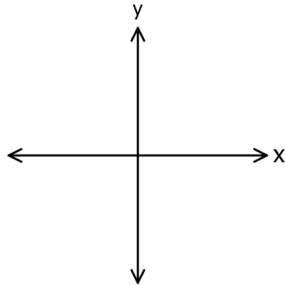
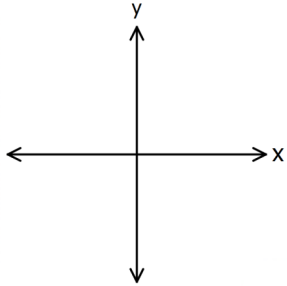
Coordinates: _____ and _____

Coordinates: _____ and _____



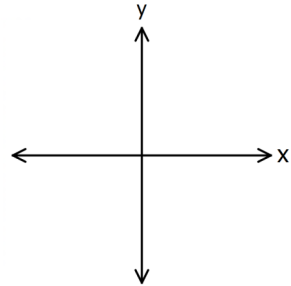
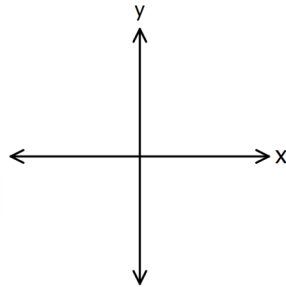
$$13. \cos \theta = -\frac{6}{11}$$

Coordinates: _____ and _____



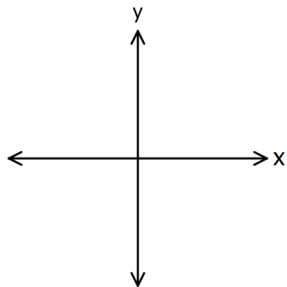
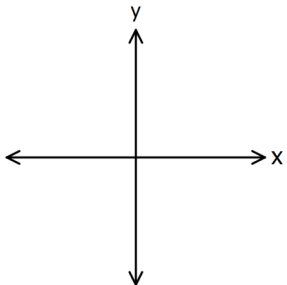
$$14. \tan \theta = -\frac{5}{12}$$

Coordinates: _____ and _____



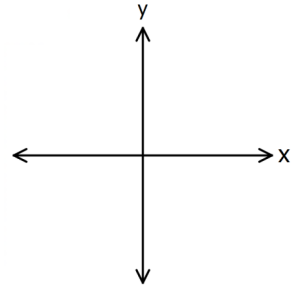
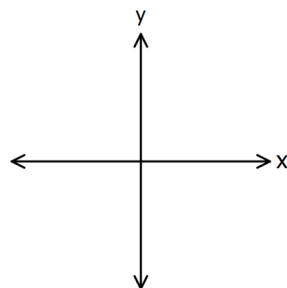
$$15. \sin \theta = -\frac{5}{6}$$

Coordinates: _____ and _____



$$16. \cos \theta = \frac{4}{5}$$

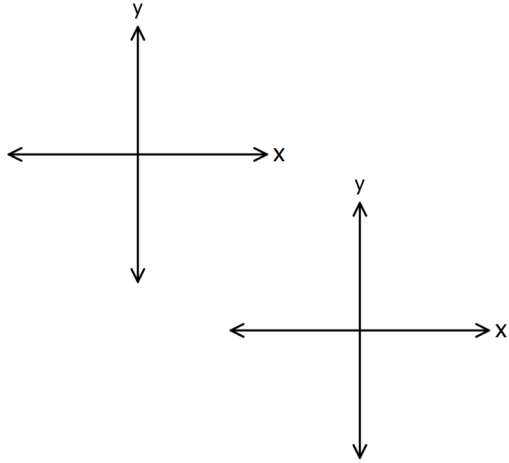
Coordinates: _____ and _____



Draw the two triangles for the trig functions and find the coordinates that go with it. There will be 2 answers. Leave answers in simplest radical form. (Remember All Students Take Calculus). Then find the angles from $[0, 360^\circ)$ in standard position (round to the nearest tenth of a degree).

17. $\cos \theta = \frac{3}{5}$

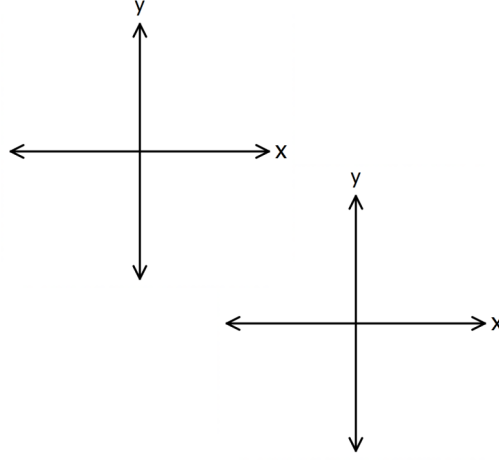
Coordinates: _____ and _____



Angles: _____ and _____

18. $\tan \theta = \frac{4}{7}$

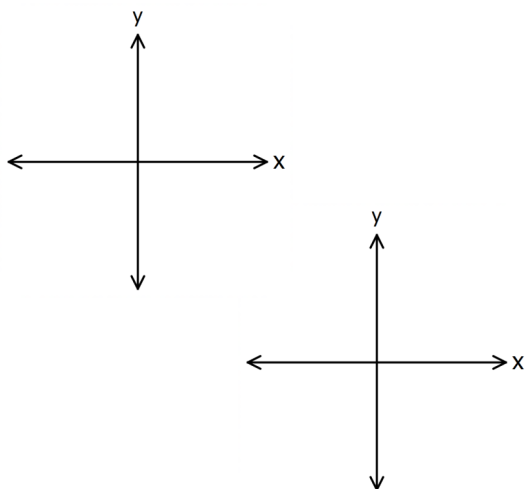
Coordinates: _____ and _____



Angles: _____ and _____

19. $\sin \theta = -\frac{12}{13}$

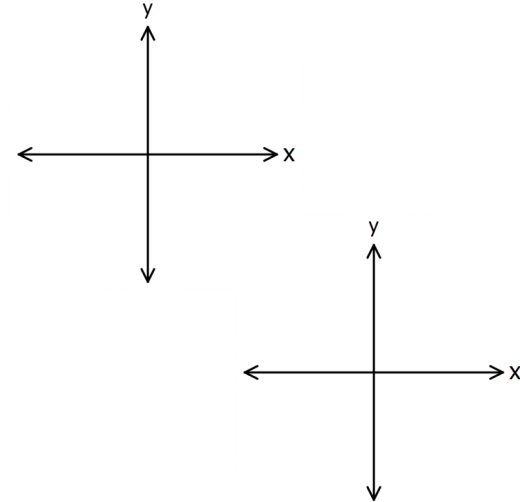
Coordinates: _____ and _____



Angles: _____ and _____

20. $\tan \theta = -\frac{4}{3}$

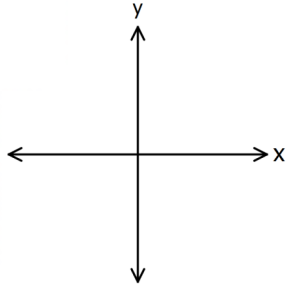
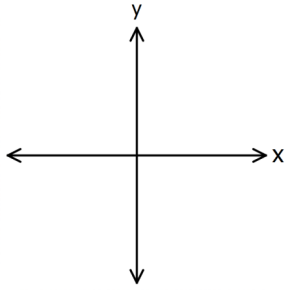
Coordinates: _____ and _____



Angles: _____ and _____

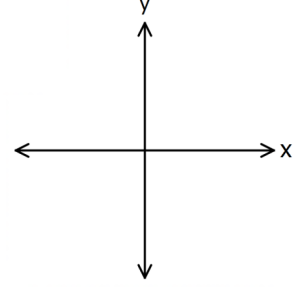
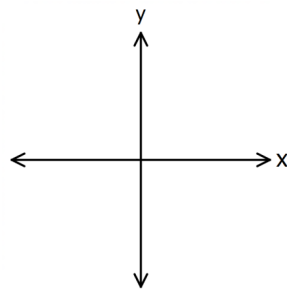
21. $\sin \theta = \frac{5}{9}$

Coordinates: _____ and _____



22. $\cos \theta = -\frac{5}{6}$

Coordinates: _____ and _____



Angles: _____ and _____

Angles: _____ and _____

23. Solve $t = -6\sin(m) + 2$ for m where $-\frac{\pi}{2} \leq m \leq \frac{\pi}{2}$