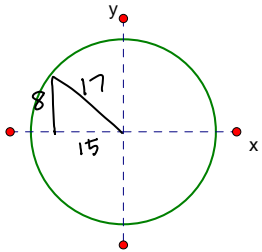


Algebra 2 Trig Honors
6.3 Day 2 Homework

Name: _____

In #1 – 6, give the values of the other trig functions. Find the measure of rotation θ and sketch the rotation. Mark the rotation with an arc and its measure.

1. $\sin \theta = \frac{8}{17}$, θ in Quadrant II.



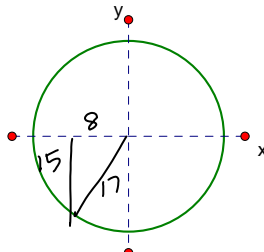
$$\cos \theta = \frac{-15}{17} \quad \tan \theta = \frac{-8}{15}$$

$$\csc \theta = \frac{17}{8} \quad \sec \theta = \frac{-17}{15}$$

$$\beta = 28^\circ$$

$$\Theta = 152^\circ$$

2. $\cos \theta = \frac{-8}{17}$, θ in Quadrant III.



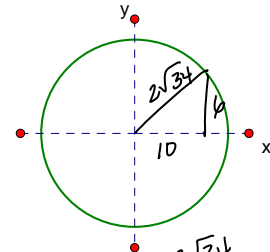
$$\sin \theta = \frac{-15}{17} \quad \tan \theta = \frac{+15}{8}$$

$$\csc \theta = \frac{-17}{15} \quad \cot \theta = \frac{+8}{15}$$

$$\beta = 62^\circ$$

$$\Theta = 242^\circ$$

3. $\tan \theta = \frac{6}{10}$, $\sin \theta > 0$.



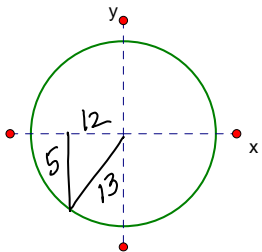
$$\sin \theta = \frac{3/\sqrt{34}}{\sqrt{34}/3} = \frac{3\sqrt{34}}{34} \quad \cos \theta = \frac{5/\sqrt{34}}{5/\sqrt{34}} = \frac{5\sqrt{34}}{34}$$

$$\csc \theta = \frac{\sqrt{34}}{3} \quad \sec \theta = \frac{\sqrt{34}}{5}$$

$$\beta = 31^\circ$$

$$\Theta = 31^\circ$$

4. $\tan \theta = \frac{5}{12}$, θ in $\cos < 0$.



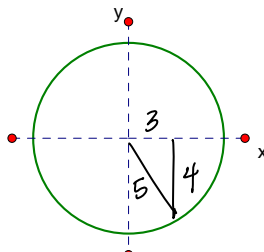
$$\sin \theta = \frac{5}{13} \quad \cos \theta = \frac{-12}{13}$$

$$\sec \theta = \frac{-13}{12} \quad \cot \theta = \frac{12}{5}$$

$$\beta = 23^\circ$$

$$\Theta = 203^\circ$$

5. $\sin \theta = -\frac{4}{5}$, θ in Quad IV.



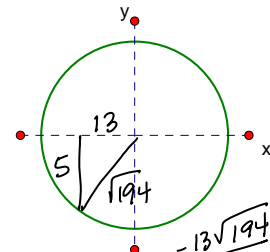
$$\cos \theta = \frac{3}{5} \quad \tan \theta = \frac{-4}{3}$$

$$\csc \theta = \frac{-5}{4} \quad \sec \theta = \frac{5}{3}$$

$$\beta = 53^\circ$$

$$\Theta = 307^\circ$$

6. $\tan \theta = \frac{5}{13}$, $\csc \theta < 0$.



$$\cos \theta = \frac{-13/\sqrt{194}}{\sqrt{194}/13} = \frac{-13\sqrt{194}}{194} \quad \sin \theta = \frac{-5/\sqrt{194}}{-5/\sqrt{194}} = \frac{-5\sqrt{194}}{194}$$

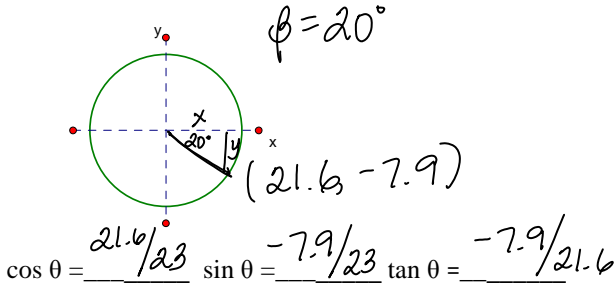
$$\csc \theta = \frac{-\sqrt{194}}{5} \quad \cot \theta = \frac{13}{5}$$

$$\beta = 21^\circ$$

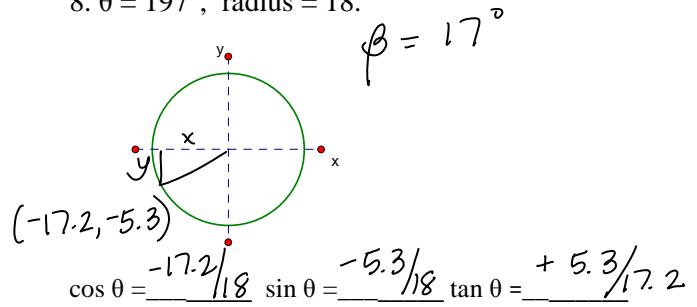
$$\Theta = 201^\circ$$

For #7-8, find the coordinates of the terminal point, rounding to the nearest tenth. Then give the values of cosine, sine and tangent for the given rotation as fractions.

7. $\theta = 340^\circ$, radius = 23

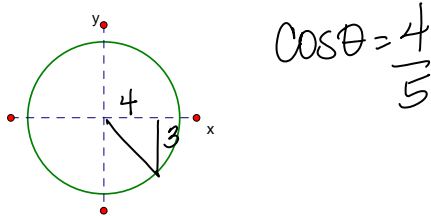


8. $\theta = 197^\circ$, radius = 18.

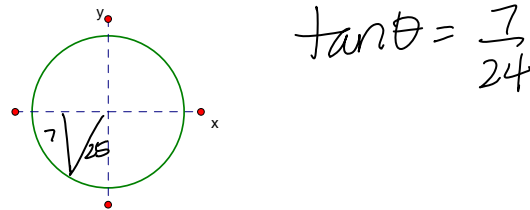


Answer problems #9-12 without using your calculator. Make a drawing, mark the rotation with an arc, but do not find its measure. Then, answer the question.

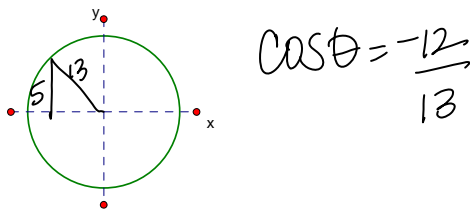
9. If $\tan \theta = -\frac{3}{4}$ and θ in Quad IV, find $\cos \theta$.



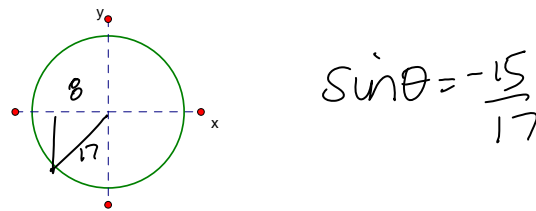
10. If $\sin \theta = -\frac{7}{25}$ and θ in Quad III, find $\tan \theta$.



11. If $\sin \theta = \frac{5}{13}$ and $\cos \theta < 0$, find $\cos \theta$.

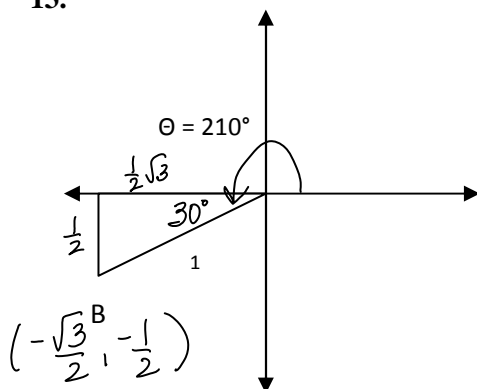


12. If $\cos \theta = -\frac{8}{17}$, $180^\circ < \theta < 270^\circ$, find $\sin \theta$.

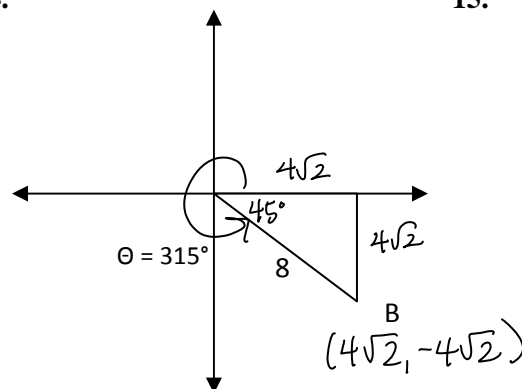


Use special right triangles to find the *exact* coordinates of B, the terminal point after rotation of θ .

13.



14.



15.

