

4. Find each of the following circular function values.

a) $\sin\left(\frac{19}{6}\pi\right)$

b) $\csc\left(\frac{5}{3}\pi\right)$

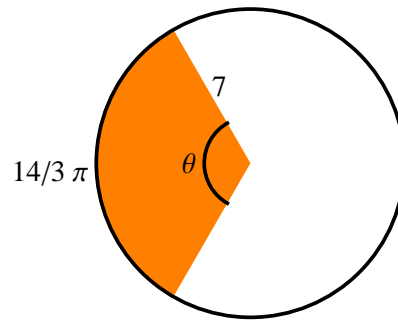
c) $\tan\left(\frac{4}{3}\pi\right)$

d) $\cos\left(\frac{25}{4}\pi\right)$

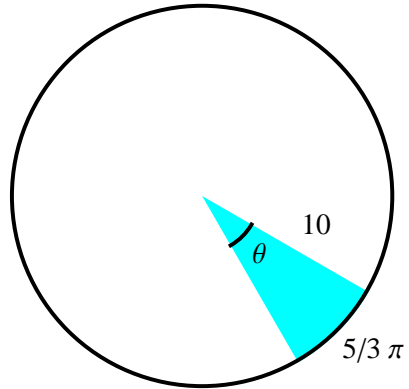
5. Determine the angular speed (in radians per hour) of the tip of a minute hand of a clock that is 8cm long.

6. Determine the linear speed (in cm per sec) of the tip of an hour hand of a clock that is 5cm long.

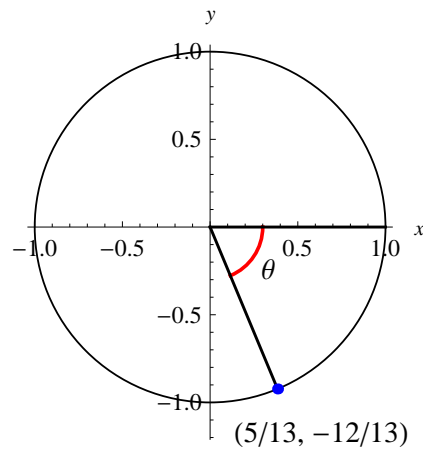
7. Find the area of the sector depicted in the following figure.



8. Find the measure of the angle given in the figure below.



9. Evaluate the six circular functions for the value of θ depicted in the following figure.



10. Using the values of $\sin(\theta)$ and $\cos(\theta)$ from the previous problem, evaluate $\sin^2(\theta) + \cos^2(\theta)$.

11. Find the exact value of θ in the given interval that has the given circular function value.

a) $\left[\frac{3}{2}\pi, 2\pi\right]; \quad \csc(\theta) = -\frac{2}{\sqrt{3}}$

b) $[11\pi, 12\pi]; \quad \tan(\theta) = -\sqrt{3}$