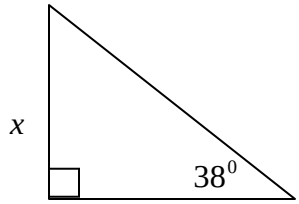
MAT 122 Quiz 2 Name_____
January 27, 2012 1.3 – 1.5

1. Find the value of sine, cosine and tangent for the angle θ, if $\sec\theta = \frac{7}{3}$ and $0 \le \theta \le \pi$

2. Suppose $\cos(\theta) = \frac{2}{3}$ and $\pi < \theta < 2\pi$. Find the following:

   a. $\tan(\theta)$ b. $\sin(\theta)$

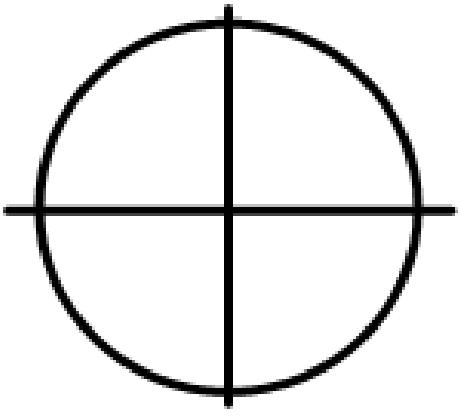
3. Solve for x:

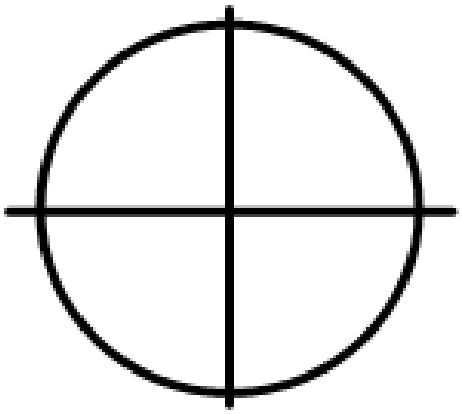


98 ft

4. Find the reference angle, θ', sketch θ and θ' in standard position, then evaluate $\sin(\theta), \cos(\theta),$ and $\tan(\theta)$. You shouldn't need a calculator.

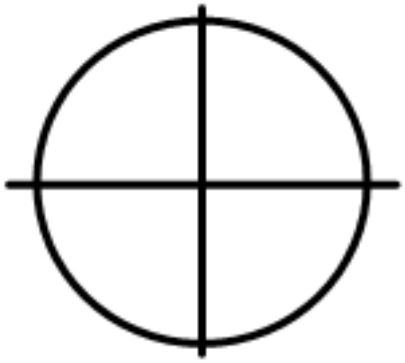
   a. $\theta = 330^0$ b. $\theta = \frac{7\pi}{3}$



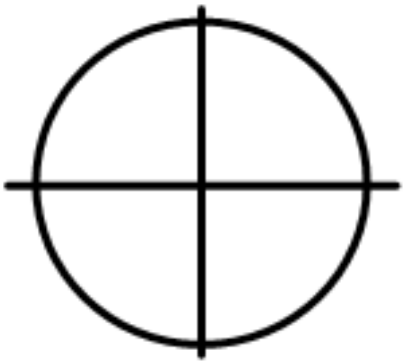


5. Find two different solutions for each Give your answers in degrees $\left(0 \le \theta < 360^0\right)$and radians $\left(0 \le \theta < 2\pi\right)$

a. $\cos(\theta) = \frac{\sqrt{3}}{2}$



b. $\sin(\theta) = -\frac{1}{\sqrt{2}}$



6. Bonus Write the formula for a cosine function, whose high point occurs at $\theta = 27$, amplitude is 33, period is 24, *and* whose lowest *y*-value is 110.