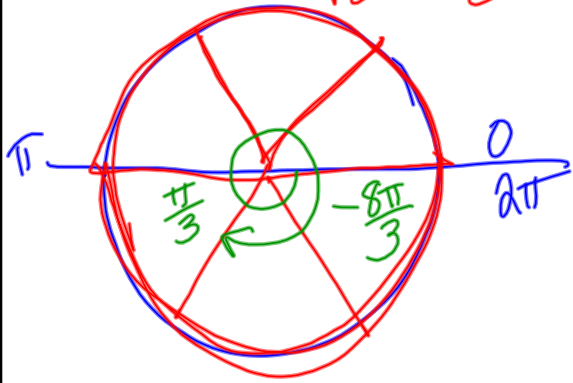
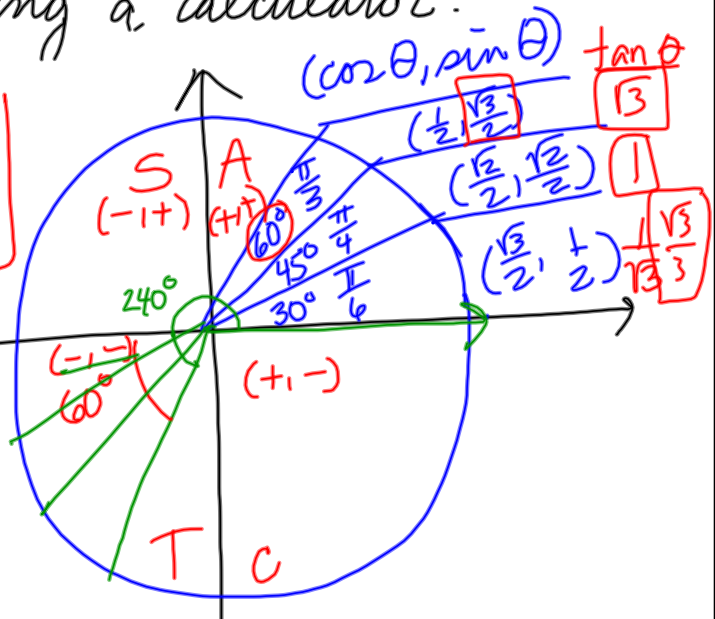


Warm-up 2/18

Evaluate without using a calculator.

a.  $\sin 240^\circ$   
 $= -\sin 60^\circ = -\frac{\sqrt{3}}{2}$

b.  $\cot\left(-\frac{8\pi}{3}\right)$   
 $= \cot \frac{\pi}{3} = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$



①  $\cot \frac{\pi}{3} = \frac{\cos \frac{\pi}{3}}{\sin \frac{\pi}{3}} = \frac{\frac{1}{2}}{\frac{\sqrt{3}}{2}} = \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{3}$

Solve for  $\theta$ .

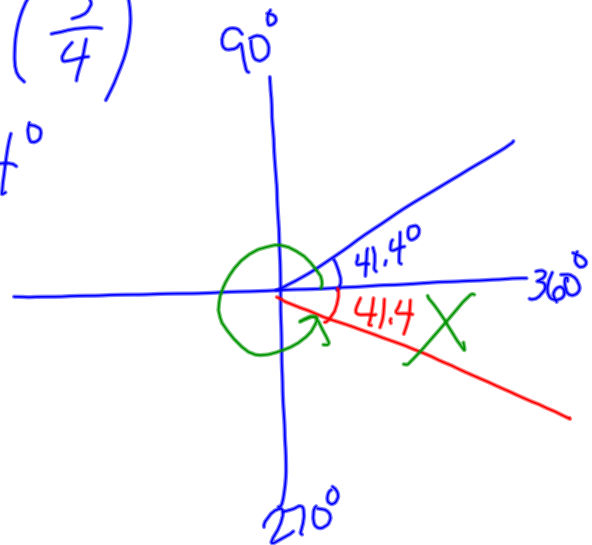
a.  $\cos \theta = \frac{3}{4}$ , where  $270^\circ < \theta < 360^\circ$ .

$$\cos^{-1}(\cos \theta) = \cos^{-1}\left(\frac{3}{4}\right)$$

$$\theta = 41.4^\circ$$

$$360^\circ - 41.4^\circ$$

$$318.6^\circ$$

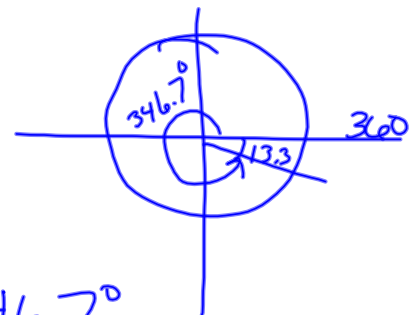


b.  $\sin \theta = -0.23$ ;  $270^\circ < \theta < 360^\circ$

$$\theta = \sin^{-1}(-0.23)$$

$$\theta \approx -13.3^\circ$$

$$\theta \approx 360^\circ - 13.3^\circ = 346.7^\circ$$



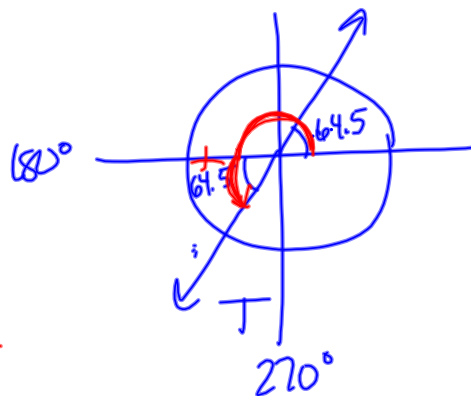
$$c. \tan \theta = 2.1$$

$$180^\circ < \theta < 270^\circ$$

$$\theta = \tan^{-1} 2.1$$

$$\theta \approx 64.5^\circ$$

$$\boxed{180^\circ + 64.5^\circ = 244.5^\circ}$$



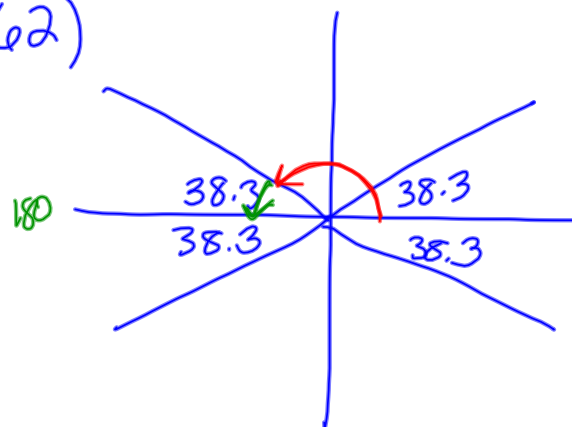
$$d. \sin \theta = 0.62; \quad 90^\circ < \theta < 180^\circ$$

$$\theta = \sin^{-1}(0.62)$$

$$\theta \approx 38.3^\circ$$

$$180^\circ - 38.3$$

$$141.7^\circ$$



$$e. \quad \cos \theta = -0.39 \quad 180^\circ < \theta < 270^\circ$$

$$\theta = \cos^{-1}(-0.39)$$

$$\theta \approx 112.95 \approx 113.0^\circ$$

