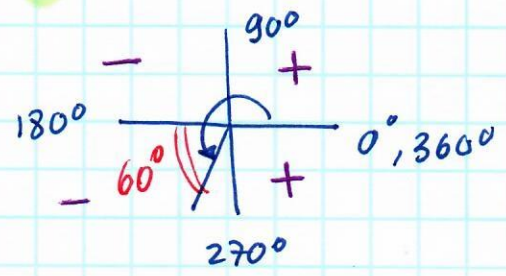


# Trigonometry Review

#6

(a)  $\cos(240^\circ) = -\cos(60^\circ) = \boxed{-\frac{1}{2}}$

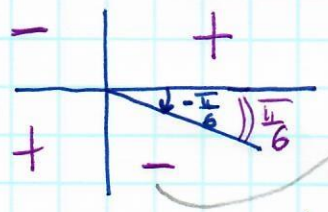
↑  
using table



The table does have the value of  $\cos(240^\circ)$ , but since we are practicing to use reference angles, I opted for  $60^\circ$  as a ref. angle of  $240^\circ$ .

(b)  $\tan\left(-\frac{\pi}{6}\right) = -\tan\left(\frac{\pi}{6}\right) = \boxed{-\frac{1}{\sqrt{3}}} = \boxed{-\frac{\sqrt{3}}{3}}$

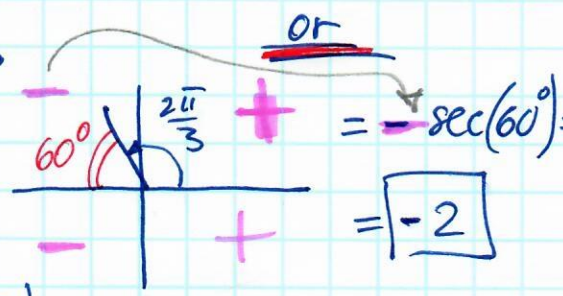
↑  
using table



(c)  $\sec\left(-\frac{2\pi}{3}\right) = \sec\left(\frac{2\pi}{3}\right) = \boxed{-2}$  from table

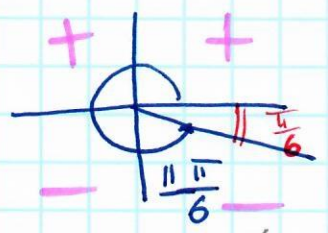
even function ↓

120°



(d)  $\sin\left(-\frac{11\pi}{6}\right) = -\sin\left(\frac{11\pi}{6}\right) =$

odd function



$= -\sin\left(\frac{\pi}{6}\right) = \sin\left(\frac{\pi}{6}\right) = \frac{1}{2}$  from table



(e)  $\tan 240^\circ = \tan 60^\circ = \boxed{\sqrt{3}}$   
 from table

(f)  $\sin\left(-\frac{\pi}{6}\right) = -\sin\left(\frac{\pi}{6}\right) = \boxed{-\frac{1}{2}}$

or

$= -\sin\left(\frac{\pi}{6}\right) = \boxed{-\frac{1}{2}}$   
 odd function

(g)  $\csc\left(-\frac{5\pi}{6}\right) = -\csc\left(\frac{5\pi}{6}\right) = \boxed{-2}$   
 odd function.  
 from table

(h)  $\cos\left(\frac{21\pi}{6}\right) = \cos\left(\frac{3\pi}{2}\right) = \cos\left(\frac{\pi}{2}\right) = \boxed{0}$

$\frac{21\pi}{6} - 2\pi = \frac{21-12}{6}\pi = \frac{9\pi}{6}$

$\frac{9\pi}{6} = \frac{3\pi}{2}$