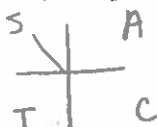



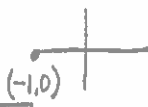
Class Examples: Evaluating from the Unit Circle

Honors PreCalculus


Find the exact value of the following trigonometric expressions.

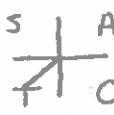
1. $\sec(-4\pi/3)$ 
 $\boxed{-2}$


2. $\sin(17\pi/6)$ 
 $\boxed{\frac{1}{2}}$

3. $\cot(5\pi)$
 $\cot(\pi)$
 $\frac{-1}{0} = \text{und}$ 


4. $\cos(87^\circ)$
 $\boxed{0.052}$

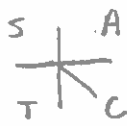
5. $\csc(13\pi/3)$ 
 $\frac{2}{\sqrt{3}} = \frac{2\sqrt{3}}{3}$

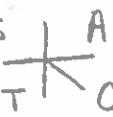
6. $\tan(-3\pi/4)$ 
 $\boxed{\frac{\sqrt{2}}{2}}$

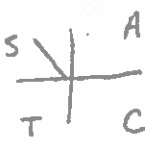
7. $\cos(315^\circ)$ 
 $\boxed{\frac{\sqrt{2}}{2}}$

8. $\cot 770^\circ$
 $= \cot 50^\circ$
 $\boxed{0.839}$

9. $\tan(-120^\circ)$ 
 $\frac{\sqrt{3}}{\frac{1}{2}} = \boxed{\sqrt{3}}$

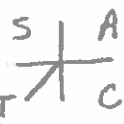
10. $\sec \frac{23\pi}{6}$ 
 $\frac{2}{\sqrt{3}} = \frac{2\sqrt{3}}{3}$

11. $\csc \frac{17\pi}{3}$ 
 $\frac{2}{\sqrt{3}} = \frac{-2\sqrt{3}}{3}$

12. $\cot -\frac{13\pi}{4}$ 
 $-\frac{\frac{\sqrt{2}}{2}}{\frac{\sqrt{2}}{2}} = \boxed{-1}$

13. $\sec \left(\frac{2\pi}{7}\right)$
 $\boxed{1.604}$


14. $\sec 780^\circ$
 $= \sec 60^\circ$
 $\boxed{2}$


15. $\sec(13\pi/4)$ 
 $\frac{2}{\sqrt{2}} = \frac{2\sqrt{2}}{2} = \boxed{-\sqrt{2}}$

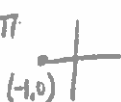
16. $\tan(0) - 6 \sin\left(\frac{\pi}{2}\right)$
 $0 - 6(1)$
 $= \boxed{-6}$


17. $3 \sec(\pi) - 5 \tan(4\pi)$
 $3(-1) - 5(0)$
 $\boxed{-3}$


18. $4 \csc\left(\frac{3\pi}{2}\right) + 3 \cos(\pi)$
 $4(-1) + 3(-1)$
 $\boxed{-7}$

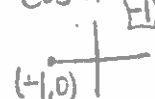
$\tan 0$  $\frac{0}{1} = \boxed{0}$

$\sin \frac{\pi}{2}$  $\boxed{1}$

$\sec \pi$  $\boxed{-1}$

$\tan 4\pi$  $\frac{0}{1} = \boxed{0}$

$\csc \frac{3\pi}{2}$  $\boxed{-1}$

$\cos \pi$  $\boxed{-1}$

$$19. \sin^2\left(\frac{2\pi}{3}\right) + \cos^2\left(\frac{2\pi}{3}\right)$$

$$\left(\frac{\sqrt{3}}{2}\right)^2 + \left(\frac{1}{2}\right)^2$$

$$\frac{3}{4} + \frac{1}{4} = \frac{4}{4} = \boxed{1}$$

$$\sin \frac{2\pi}{3}$$



$$\cos \frac{2\pi}{3}$$

$$\boxed{\frac{1}{2}}$$

$$\boxed{\frac{\sqrt{3}}{2}}$$

$$20. \cot^2\left(\frac{3\pi}{4}\right) - \sin\left(\frac{\pi}{6}\right) + 4 \tan\left(\frac{\pi}{4}\right)$$

$$(-1)^2 - \frac{1}{2} + 4(1)$$

$$1 - \frac{1}{2} + 4$$

$$\boxed{\frac{9}{2}}$$

$$\cot \frac{3\pi}{4}$$



$$\boxed{-1}$$