GSE PreCalculus **Name**_____

Test 3 Review: Introduction to Trig

NON - CALCULATOR

Complete the missing information in the following table:

Degrees	0°	30°	45°	210°	225°	120°
Radians (θ)	0	$\frac{\pi}{6}$	$\pi/4$	$\frac{7\pi}{6}$	$5\pi/4$	$-\frac{4\pi}{3}$
Coordinates	$(1,0)$	$(\sqrt{3}/2, 1/2)$	$(\frac{\sqrt{2}}{2}, \frac{\sqrt{2}}{2})$	$(-\sqrt{3}/2, -1/2)$	$(-\frac{\sqrt{2}}{2}, -\frac{\sqrt{2}}{2})$	$(-1/2, \sqrt{3}/2)$

Evaluate the following:

1) $\csc 45^\circ$ $\sqrt{2}$

2) $\tan\frac{3\pi}{4}$ -1

3) $\cos(-30^\circ)$ $\sqrt{3}/2$

4) $\cot\frac{\pi}{2}$ 0

5) $\sec\left(-\frac{5\pi}{6}\right)$ $-\frac{2\sqrt{3}}{3}$

6) $\sin\frac{11\pi}{4}$ $\frac{\sqrt{2}}{2}$

7) $\tan(-315^\circ)$ 1

$(0,1)$

8) $\cos\pi$ -1

9) $\sec(-8\pi)$ 1

*10) $\sec\left(-\frac{3\pi}{2}\right)$ und f

why? $-\frac{3\pi}{2} + \frac{2\pi}{1}\cdot\frac{2}{2}$ $-\frac{3\pi}{2} + \frac{4\pi}{2} = \pi/2$ $(0,1)$ $\cos = 0$, $\sec\theta = \frac{1}{\cos\theta} = \frac{1}{0}$ so, und!

11) $\cos\left(\frac{9\pi}{2}\right)$ 0

12) $\tan\left(-\frac{\pi}{3}\right)$ $-\sqrt{3}$

13) $\sin\left(-\frac{11\pi}{6}\right)$ $1/2$

14) $\cot(-210^\circ)$ $-\sqrt{3}$

*15) $\csc(-\pi)$ und f

16. Find the reference angle, 1 positive, and 1 negative coterminal angle.

a. $\theta = \frac{5\pi}{7}$ $5\pi/7$

$\frac{5\pi}{12}\cdot\frac{180}{\pi}$

$5\pi/12 = 75^\circ$

π or $7\pi/7$

$\frac{5\pi}{7} - \frac{2\pi}{1}\cdot\frac{7}{7}$

$\frac{5\pi}{7} - \frac{14\pi}{7} = \boxed{-\frac{9\pi}{7}}$

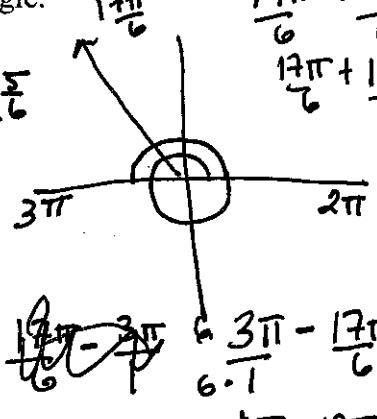
$\frac{5\pi}{7} + \frac{2\pi}{1}\cdot\frac{7}{7}$

$\frac{5\pi}{7} + \frac{14\pi}{7} = \boxed{\frac{19\pi}{7}}$

b. $\theta = \frac{17\pi}{6}$ Ref

$\frac{7\pi}{7} - \frac{5\pi}{7} = \boxed{\frac{2\pi}{7}}$

$\frac{17\pi}{6} \to 2\frac{5}{6}$



$\frac{17\pi}{6} + \frac{2\pi}{1}\cdot\frac{6}{6}$

$\frac{17\pi}{6} + \frac{12\pi}{6} = \boxed{\frac{29\pi}{6}}$

$\frac{17\pi}{6} - \frac{2\pi}{1}\cdot\frac{6}{6}$

$\frac{17\pi}{6} - \frac{12\pi}{6} = \boxed{\frac{5\pi}{6}}$

$\frac{3\pi}{6\cdot 1} - \frac{17\pi}{6}$ Ref

$\frac{18\pi}{6} - \frac{17\pi}{6} = \boxed{\frac{\pi}{6}}$

$\frac{5\pi}{6} - \frac{2\pi}{1}\cdot\frac{6}{6}$

$\frac{5\pi}{6} - \frac{12\pi}{6} = \boxed{-\frac{7\pi}{6}}$