Name_____

Date_____

Advanced Algebra Advanced Trig

Assignment #7 Radian Measure

Decide if the angles are co-terminal:

1) $\frac{\pi}{3}$ and $\frac{-5\pi}{3}$

Yes

$\frac{\pi}{3} + 2\pi$ $\quad$ $\frac{\pi}{3} - 2\pi$

$\frac{\pi}{3} + \frac{6\pi}{3}$ $\quad$ $\frac{7\pi}{3}$ $\quad$ $-\frac{5\pi}{3}$

2) $\frac{-11\pi}{6}$ and $\frac{13\pi}{6}$

2 Revolutions

$-\frac{11\pi}{6} + 2\pi$

$-\frac{11\pi}{6} + \frac{12\pi}{6}$

$\frac{\pi}{6}$ $\quad$ $+ 2\pi$ $\quad$ $\frac{13\pi}{6}$ yes

3) $\frac{3\pi}{4}$ and $\frac{-13\pi}{4}$

$\frac{3\pi}{4} + 2\pi$

$\frac{11\pi}{4}$

$\frac{3\pi}{4} - 2\pi$ yes 2 Revolutions

$-\frac{5\pi}{4} - 2\pi$ $\quad$ $-\frac{13\pi}{4}$

4) $\frac{2\pi}{3}$ and $\frac{-5\pi}{6}$

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

$\frac{2\pi}{3} - \frac{6\pi}{3}$

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

NO

Find the complement of the angle (remember $90 = \frac{\pi}{2}$)

5) $\frac{2\pi}{9}$

$\frac{2\pi}{9} \cdot \frac{180}{\pi}$ $\quad$ 40° $\quad$ $90 - 40$ $\quad$ 50 $\quad$ compliment

$\frac{5\pi}{180}$ $\quad$ $\frac{5\pi}{18}$

6) $\frac{5\pi}{12}$

$\frac{\pi}{2} - \frac{5\pi}{12}$

$\frac{6\pi}{12} - \frac{5\pi}{12}$ $\quad$ $\frac{\pi}{12}$ $\quad$ compliment

7) $\frac{\pi}{6}$ $\quad$ $\frac{\pi}{2} - \frac{\pi}{6}$ $\quad$ $\frac{2\pi}{6}$ $\quad$ $\frac{\pi}{3}$

8) $\frac{2\pi}{5}$

$\frac{2\pi}{5} - \frac{\pi}{2}$

$\frac{4\pi}{10} - \frac{5\pi}{10}$ $\quad$ $\frac{\pi}{10}$

Find the supplement of the angle (remember $180 = \pi$)

Subtract from π! To find Supplement

9) $\frac{2\pi}{9}$

$\frac{2\pi}{9} - \pi$

$-\frac{7\pi}{9}$

10) $\frac{4\pi}{5}$

$\pi - \frac{4\pi}{5}$

$\frac{5\pi}{5} - \frac{4\pi}{5}$ $\quad$ $\frac{\pi}{5}$

11) $\frac{\pi}{3}$

$\pi - \frac{\pi}{3}$

$\frac{3\pi}{3} - \frac{\pi}{3}$

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

12) $\frac{3\pi}{16}$

$\pi - \frac{3\pi}{16}$

$\frac{16\pi}{16} - \frac{3\pi}{16}$ $\quad$ $\frac{13\pi}{16}$

$\frac{4\pi}{5} \cdot \frac{180}{\pi}$ $\quad$ $\frac{36}{1}$ $\quad$ $\frac{36}{144}$ $\quad$ $\frac{36}{180}$ $\quad$ $\frac{1}{20}$