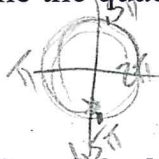
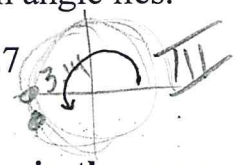
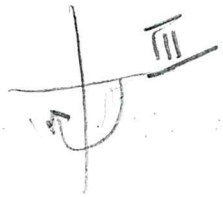
Worksheet 4.1 Precalculus w/ Trig Name _____
Period _____

1. Determine the quadrant in which each angle lies.

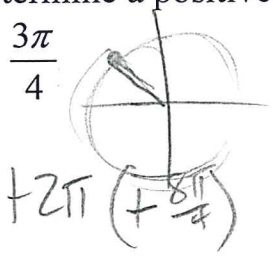
a) $\frac{14\pi}{9}$  IV because $\frac{14}{9} > 1.5$

b) 3.7  III

c) $-115°$  III

On questions 2 and 3, the answers must be in the same units as given.

2. Determine a positive coterminal angle for each angle.

a) $\frac{3\pi}{4}$  $+2\pi\left(+\frac{8\pi}{4}\right)$ $\frac{11\pi}{4}$

b) $-300°$ $60°$

3. a. Find the complement of $\frac{\pi}{7}$. $\frac{\pi}{2}-\frac{\pi}{7}=\frac{7\pi}{14}-\frac{2\pi}{14}=\frac{5\pi}{4}$

b. Find the supplement of $\frac{1}{5}$ $\pi-\frac{1}{5}$ in calculator ≈ 2.94

4. Rewrite each angle in radian measure as a multiple of π.

a) $240°$ $\frac{240}{180}=\frac{x}{\pi}$ $\frac{4}{3}\pi$

b) $165°$ $\frac{165}{180}=\frac{x}{\pi}$ $\frac{33}{36}=\frac{11\pi}{12}$

5. Rewrite each angle in degree measure.

a) $\frac{4\pi}{3}$ $\frac{\frac{4\pi}{3}}{\pi}=\frac{x}{180}=\frac{180\cdot 4}{3}$ $240°$

b) $\frac{7\pi}{12}$ $\frac{\frac{7\pi}{12}}{\pi}=\frac{x}{180}$ $\frac{15}{180\cdot 7}{}_{12}$ $\frac{15}{105}°$

6. Find the radian measure of the central angle of a circle of radius 3 *cm* that intercepts an arc of length 7 *cm*. learning Tuesday, not on quiz

7. Convert the angle measure to radians. Round to the nearest thousandth.
72.5°
$\frac{72.5}{180}=\frac{x}{\pi}$ $\frac{72.5\pi}{180}=\frac{180x}{180}$ $\frac{72.5}{180}\pi \approx 1.265$ radians

8. Convert from radians to degrees. Round to the nearest thousandth.
$\frac{\frac{7\pi}{13}}{\pi}=\frac{x}{180}$ $\frac{7}{13}\cdot 180 \approx 96.923°$