Georgia Gwinnett College
Precalculus

Draw the following angles in standard position:

1) $\theta = \frac{8\pi}{3}$

$\frac{8\pi}{3} - 2\pi = \frac{2\pi}{3}$

$\Rightarrow \frac{8\pi}{3} = 2\pi + \frac{2\pi}{3}$

$\theta = \frac{8\pi}{3}$

2) $\alpha = 450°$

$450° - 360° = 90°$

$\alpha = 450°$

3) $\theta = -\frac{2\pi}{3}$

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

4) $\beta = -330°$

$\beta = -330°$

5) $\gamma = -\frac{10\pi}{3} = -\left(2\pi + \frac{4\pi}{3}\right)$

$\frac{10\pi}{3} - 2\pi = \frac{4\pi}{3}$

$\gamma = -\frac{10\pi}{3}$

6) $\theta = 570°$

$520° - 360° = 210°$

$\theta = 520°$

7) $x = -\frac{7\pi}{6}$

$x = -\frac{7\pi}{6}$

8) $\theta = 750°$

$750° - 360° = 390°$
$390° - 360° = 30°$

$\theta = 750°$

9) $\theta = -\frac{9\pi}{4} = -\left(2\pi + \frac{\pi}{4}\right)$

$\frac{9\pi}{4} - 2\pi = \frac{\pi}{4}$

$\theta = -\frac{9\pi}{4}$

10) $x = -\dfrac{19\pi}{4}$

11) $\theta = -\dfrac{19\pi}{6}$

12) $\theta = -945°$

$X = -\dfrac{19\pi}{4}$

$\theta = -\dfrac{19\pi}{6}$

$\theta = -945°$
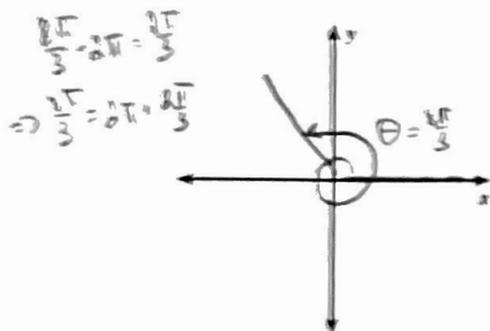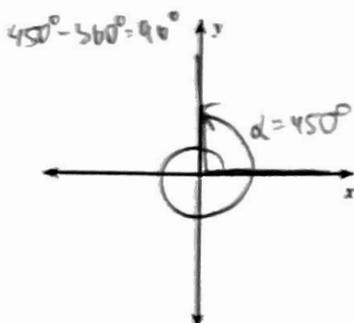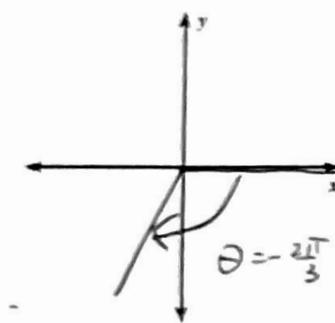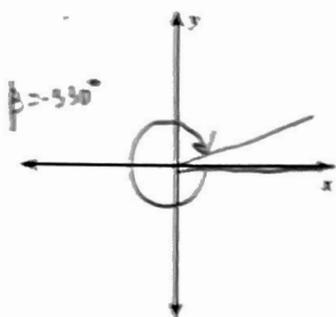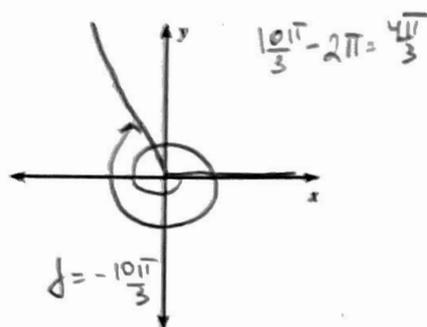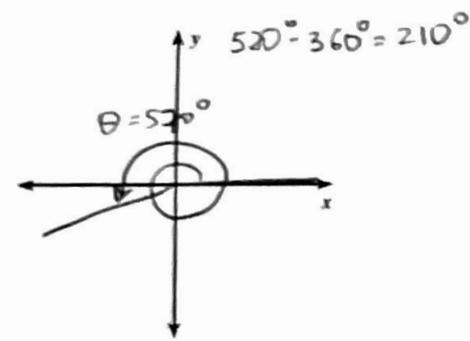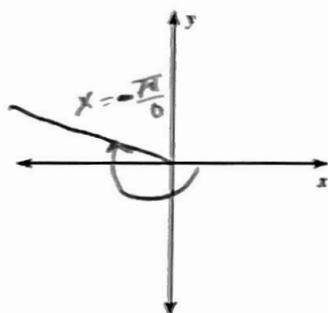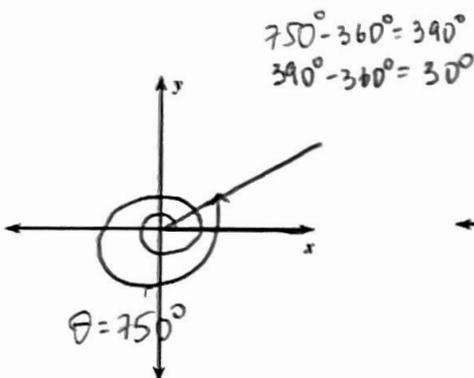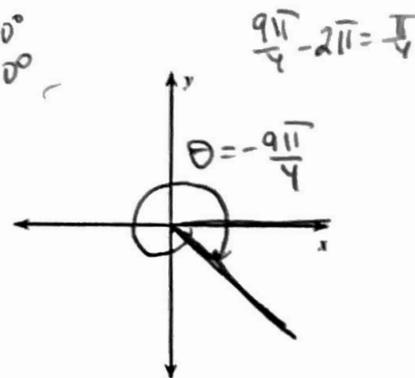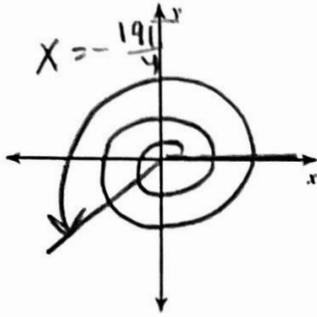
$\dfrac{19\pi}{4} - 2\pi = \dfrac{19\pi}{4} - \dfrac{8\pi}{4} = \dfrac{11\pi}{4}$

$\dfrac{11\pi}{4} - 2\pi = \dfrac{11\pi}{4} - \dfrac{8\pi}{4} = \dfrac{3\pi}{4}$

$-\dfrac{19\pi}{4} = -\left(2\pi + 2\pi + \dfrac{3\pi}{4}\right)$
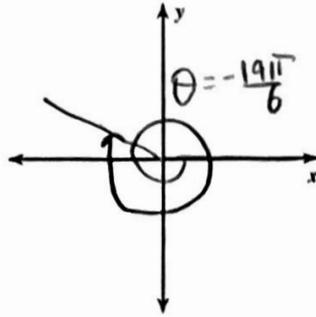
$\dfrac{19\pi}{6} - 2\pi = \dfrac{19\pi}{6} - \dfrac{12\pi}{6} = \dfrac{7\pi}{6}$

$-\dfrac{19\pi}{6} = -\left(2\pi + \dfrac{7\pi}{6}\right)$
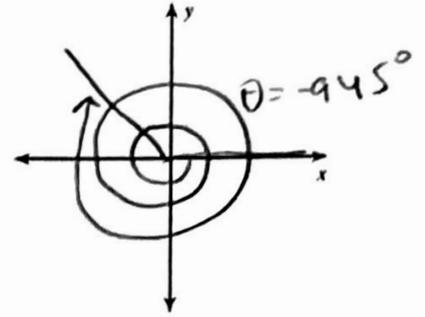
$945° - 360° = 585$

$585° - 360° = 225°$

$-945° = -(360° + 360° + 225°)$