Bellwork Tuesday, April 1, 2014

1. Convert each degree measure into radians.

a) $220° \cdot \frac{\pi}{180°} = \frac{11\pi}{9}$

b) $1125° \cdot \frac{\pi}{180°} = \frac{25\pi}{4}$

2. Convert each radian measure into degrees.

a) $\frac{31\pi}{12} \cdot \frac{180°}{\pi} = 465°$

b) $\frac{10\pi}{3} \cdot \frac{180}{\pi} = 600°$

3. Find both a positive and a negative coterminal angle for each given angle. Give your answer in radians.

a) $\theta = -\frac{3\pi}{5} \pm 2\pi$

$-\frac{3\pi}{5} + 2\pi$

$-\frac{3\pi}{5} + \frac{10\pi}{5} = \frac{7\pi}{5}$

$-\frac{3\pi}{5} - \frac{10\pi}{5} = \frac{-13\pi}{5}$

b) $\theta = \frac{2\pi}{11} \pm \frac{22\pi}{11}$

pos $\frac{24\pi}{11}$

neg $\frac{-20\pi}{11}$

4. Find the measure of an angle between 0 and 2π that is coterminal to each given angle. Give your answer in radians.

a). $\frac{9\pi}{2} - \frac{4\pi}{2}$

$= \frac{5\pi}{2} - \frac{4\pi}{2}$

$= \frac{\pi}{2}$

b). $-\frac{13\pi}{6} + \frac{12\pi}{6}$

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

$= \frac{11\pi}{6}$

5. Find the exact value of each.

a) $\tan 5\pi$

-2π

$\tan 3\pi$

-2π

$\tan\pi = \frac{0}{-1} = 0$

b) $\cos\frac{8\pi}{3}$

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

$\cos\frac{2\pi}{3} = -\frac{1}{2}$

c) $\sin\frac{-13\pi}{6}$

$+12\pi$

6

$\sin -\pi/6 + 12\pi/6$ $\sin\frac{11\pi}{6} = -\frac{1}{2}$

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

$\tan\frac{\pi}{2} = \frac{1}{0}$

Undefined