Algebra 2 Bellwork Friday, May 6, 2016 3rd hour

1. Are $730°$ and $3990°$ coterminal?

2. Find an angle between $0°$ and $360°$ coterminal to $-1342°$

3. Find an angle between 0 and 2π coterminal to $\frac{47\pi}{9}$

4. On which axis or in which quadrant is the terminal side of each angle located?

a) $1675°$ b) $-\frac{23\pi}{2}$ c) $\frac{39\pi}{4}$

Algebra 2 Bellwork Friday, May 6, 2016 3rd hour Answers

1. Are $730°$ and $3990°$ coterminal?

$3990 - 730 = 3260$ $\frac{3260}{360} = 9.06$

Since they are NOT separated by a multiple of 360° They are NOT coterminal

2. Find an angle between $0°$ and $360°$ coterminal to $-1342°$

$-1342 + 1080 = -262 \rightarrow -262 + 360 = 98°$

3. Find an angle between 0 and 2π coterminal to $\frac{47\pi}{9}$

$\frac{47\pi}{9} - 2\pi \rightarrow \frac{47\pi}{9} - \frac{18\pi}{9} = \frac{29\pi}{9} - \frac{18\pi}{9} = \frac{11\pi}{9}$

4. On which axis or in which quadrant is the terminal side of each angle located?

a) $1675°$
-1080
595
-360
$235°$
Quadrant III

b) $-\frac{23\pi}{2}$
$+\frac{4\pi}{2} = -\frac{19\pi}{2} + \frac{4\pi}{2}$
pos y-axis
$= -\frac{15\pi}{2} + \frac{4\pi}{2}$
$-\frac{11\pi}{2} + \frac{4\pi}{2} = -\frac{7\pi}{2} + \frac{4\pi}{2} = -\frac{3\pi}{2} + \frac{4\pi}{2} = \frac{\pi}{2}$

c) $\frac{39\pi}{4} \rightarrow 9\frac{3}{4}\pi$
$-8\pi \rightarrow$ 4 full turns
$1\frac{3}{4}\pi = \frac{7\pi}{4}$
Quadrant IV