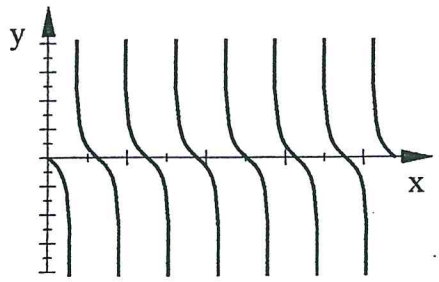
Algebra 2 Bellwork Wednesday, May 25, 2016

Find the period and write the equation of each Tangent Function.

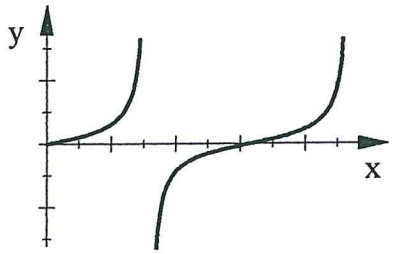
1. The window shown is 0 to 2π



Period =

EQ:

2. The window shown is 0 to 5π



Period =

EQ:

3. Find the location of four x-intercepts and four Vertical Asymptotes.

$y = -\text{Tan}6x$

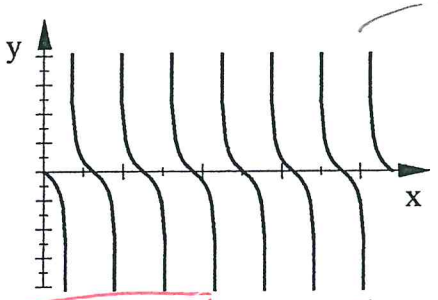
x-int:

VA:

Algebra 2 Bellwork Wednesday, May 25, 2016 Answers

Find the period and write the equation of each Tangent Function.

1. The window shown is 0 to 2π

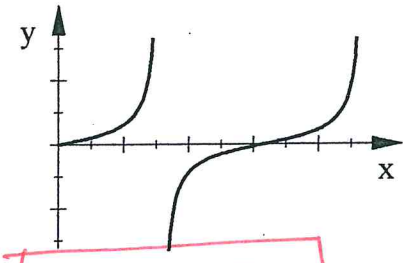


7 cycles

Period = $\frac{2\pi}{7}$ $b = \frac{\pi}{2\pi/7} = \pi \cdot \frac{7}{2\pi} = \frac{7}{2}$

EQ: $y = -\text{Tan}\frac{7x}{2}$

2. The window shown is 0 to 5π



$1\frac{1}{2}$ cycles $\rightarrow \frac{3}{2}$

period $= \frac{5\pi}{\frac{3}{2}} = 5\pi \cdot \frac{2}{3}$

Period = $\frac{10\pi}{3}$ $\rightarrow$ $b = \frac{\pi}{\frac{10\pi}{3}} = \pi \cdot \frac{3}{10\pi} = \frac{3}{10}$

EQ: $y = \text{Tan}\frac{3x}{10}$

3. Find the location of four x-intercepts and four Vertical Asymptotes.

$y = -\text{Tan}6x$ period $= \frac{\pi}{6} = \frac{2\pi}{12}$

x-int: $0, \frac{\pi}{6}, \frac{\pi}{3}, \frac{\pi}{2}$

VA: $\frac{\pi}{12}, \frac{\pi}{4}, \frac{5\pi}{12}, \frac{7\pi}{12}$

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