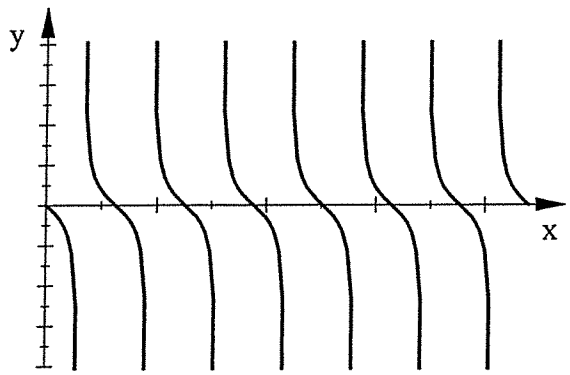
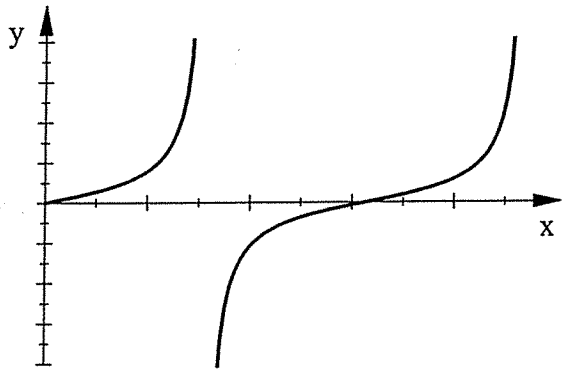
Algebra 2 Bellwork Thursday, March 26, 2015

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

1. The window shown is 0 to 2π



2. The window shown is 0 to 5π



Find the location of three x-intercepts and three Vertical Asymptotes.

3. $y = -7\text{Tan}6x$

4. $y = 3\text{Tan}\frac{7x}{4}$

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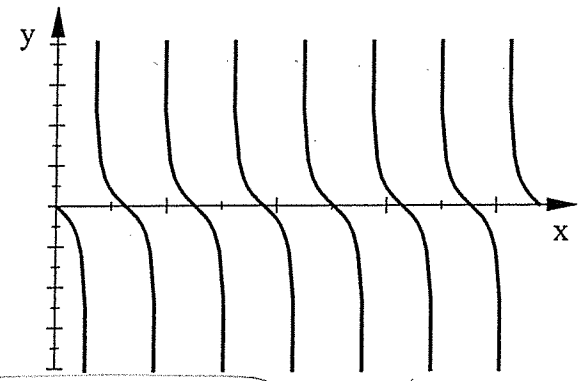
Answers

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

1. The window shown is 0 to 2π

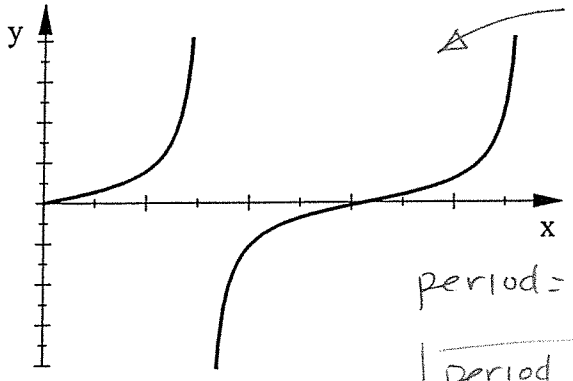


period $= \frac{2\pi}{7}$

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

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

2. The window shown is 0 to 5π



1½ cycles $= \frac{3}{2}$

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

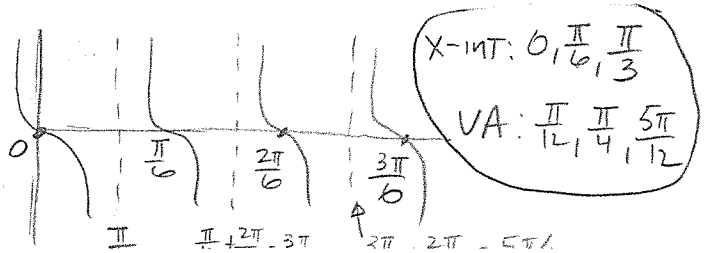
period $= \frac{10\pi}{3}$

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

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

Find the location of three x-intercepts and three Vertical Asymptotes.

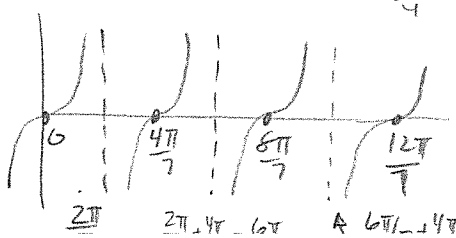
3. $y = -7\text{Tan}6x$ period $= \frac{\pi}{6}$



X-INT: $0, \frac{\pi}{6}, \frac{\pi}{3}$

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

4. $y = 3\text{Tan}\frac{7x}{4}$ period $= \frac{\pi}{\frac{7}{4}} = \frac{4\pi}{7}$



X-INT: $0, \frac{4\pi}{7}, \frac{8\pi}{7}$

VA: $\frac{2\pi}{7}, \frac{6\pi}{7}, \frac{10\pi}{7}$