Algebra 2 Bellwork Tuesday, May 24, 2016

1. Find all x-intercepts and Vertical Asymptotes for this rational function: $y = \frac{x^2 - 2x - 15}{x^2 - 16}$

x-int = VA :

2. Given CosA = $\frac{5}{7}$ in $\triangle ABC$ find the following as ratios:

a) Tan A b) Sin A c) Cos B

3. Graph one period of this function. Label the coordinates of all Maximums, Minimums, and Zeros.

$y = -5\text{Sin}(9(x + \frac{7\pi}{6})) - 8$

Algebra 2 Bellwork Tuesday, May 24, 2016 Answers

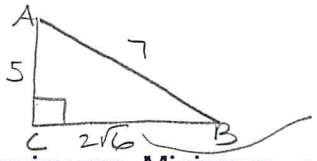
1. Find all x-intercepts and Vertical Asymptotes for this rational function: $y = \frac{x^2 - 2x - 15}{x^2 - 16}$

x-int = $-3, 5$ VA : $x = \pm 4$

$= \frac{(x-5)(x+3)}{(x+4)(x-4)}$

2. Given CosA = $\frac{5}{7}$ in $\triangle ABC$ find the following as ratios:

a) Tan A $\frac{2\sqrt{6}}{5}$ b) Sin A $\frac{2\sqrt{6}}{7}$ c) Cos B $\frac{2\sqrt{6}}{7}$



$5^2 + x^2 = 7^2$
$x = 2\sqrt{6}$

3. Graph one period of this function. Label the coordinates of all Maximums, Minimums, and Zeros.

$y = -5\text{Sin}(9(x + \frac{7\pi}{6})) - 8$

Phase shift: $\frac{7\pi}{6}$ left

period = $\frac{2\pi}{9}$

1/4 of a period $\frac{2\pi}{9} \cdot \frac{1}{4} = \frac{\pi}{18}$