Algebra 2 Bellwork Friday, February 6, 2015

Without using a calculator state the equation of the Horizontal Asymptotes, if any.

1. $\frac{6x^3 - x^2 + 9}{2x^2 - 12}$

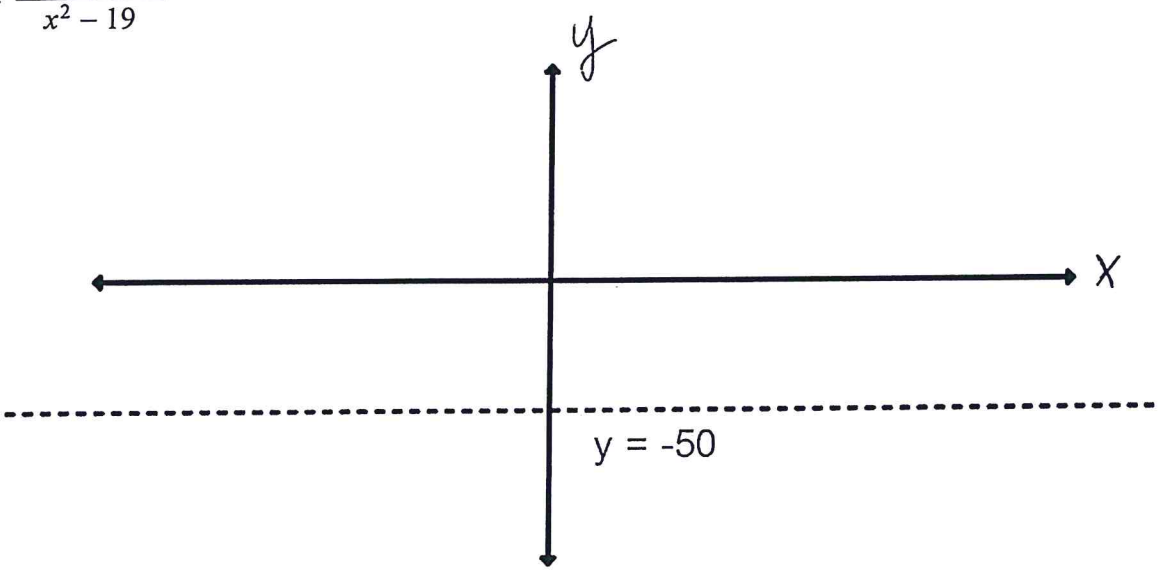
2. $\frac{7x^2 + 10x - 4}{3x^2 + 5x + 2}$

3. $\frac{8x + 15}{2x^2 - 5}$

4. $\frac{12x^2 + 24x^3 - 15}{6x^3 - 2x^2 + 3}$

5. Use the TABLE function to sketch the End Behavior of this function whose HA is $y = -50$

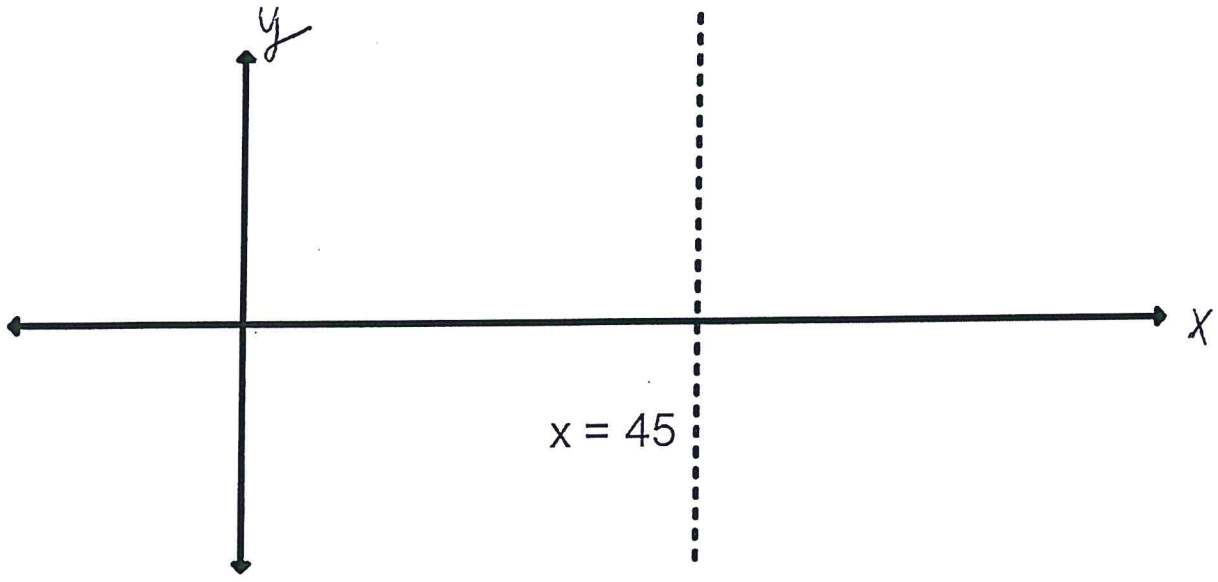
$y = \frac{-50x^2 + 3x}{x^2 - 19}$



6. Use the TABLE function to sketch the behavior of the graph to the left and the right sides of the VA

$x = 45$

$y = \frac{x^2 - 6x - 7}{x - 45}$



Algebra 2 Bellwork Friday, February 6, 2015 ANSWERS

Without using a calculator state the equation of the Horizontal Asymptotes, if any.

1. $\frac{6x^3 - x^2 + 9}{2x^2 - 12}$ NO HA

2. $\frac{7x^2 + 10x - 4}{3x^2 + 5x + 2}$ HA: $y = \frac{7}{3}$

3. $\frac{8x + 15}{2x^2 - 5}$ HA: $y = 0$

4. $\frac{12x^2 + 24x^3 - 15}{6x^3 - 2x^2 + 3}$ HA: $y = \frac{24}{6} = 4$

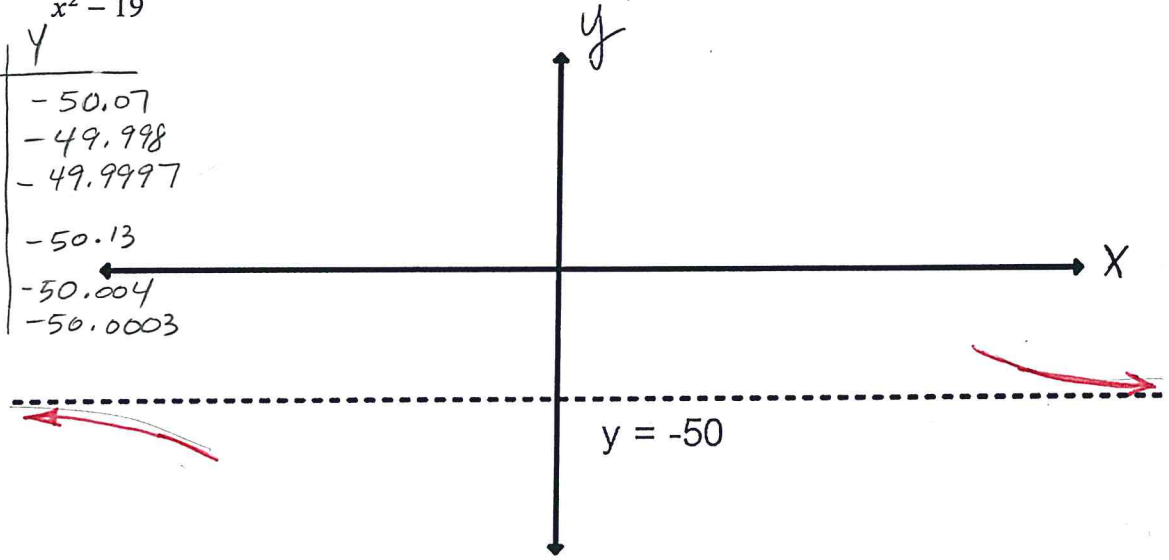
5. Use the TABLE function to sketch the End Behavior of this function whose HA is $y = -50$

$y = \frac{-50x^2 + 3x}{x^2 - 19}$

X	Y
100	-50.07
1000	-49.998
10000	-49.9997
-100	-50.13
-1000	-50.004
-10000	-50.0003

RIGHT

LEFT



6. Use the TABLE function to sketch the behavior of the graph to the left and the right sides of the VA

$x = 45$

$y = \frac{x^2 - 6x - 7}{x - 45}$

LEFT SIDE

X	Y
44.9	-17396
44.99	-1.7×10^5
44.999	-1.7×10^6

RIGHT SIDE

X	Y
45.1	17564
45.01	174884
45.001	1.75×10^6