Algebra 2 Bellwork Friday, December 13, 2013

For each transformation of the reciprocal function $y = \frac{1}{x}$ give the following:

a. The location of the branches
b. The equation of the Horizontal Asymptote.
c. The equation of the Vertical Asymptote.

1. $y = \frac{-2}{x} + 4$

Location of Branches: II & IV

HA: $y=4$

VA: $x=0$

2. $y = \frac{5}{x} - 3$

Location of Branches: I & III

HA: $y=-3$

VA: $x=0$

3. $y = \frac{-2}{x+4}$

Location of Branches: II IV

HA: $y=0$

VA: $x=-4$

4. $y = \frac{5}{x-3}$

Location of Branches: I & III

HA: $y=0$

VA: $x=3$

5. $y = \frac{-3}{x-2} + 1$

Location of Branches: II IV

HA: $y=1$

VA: $x=2$

6. $y = \frac{7}{x+6} - 9$

Location of Branches: I & III

HA: $y=-9$

VA: $x=-6$