Bellwork Alg 2 Monday, January 6, 2020

For 1 to 3, write the equation of each transformation of the Parent Reciprocal function $y = \frac{1}{x}$

1. Moved 5 units left, twice as tall, branches are in quadrants I and III.

$y =$

2. Moved 8 units up, half as tall, branches in quadrants II and IV.

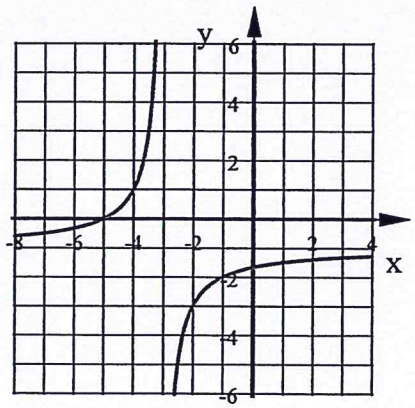
$y =$

3. The Vertical Asymptote is $x = 3$, the Horizontal Asymptote is $y = -2$, and the branches are in quadrants II and IV.

$y =$

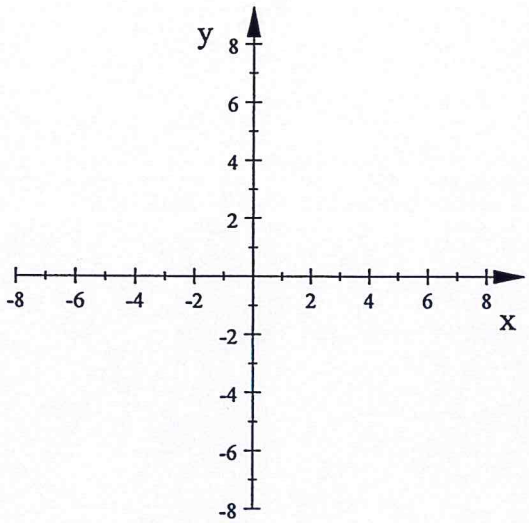
4. Write the equation of this graph which is a transformation of $y = \frac{2}{x}$

EQ: $y =$



5. Graph this transformation of the parent reciprocal function. Show the asymptotes as dashed lines and state the equations of the asymptotes.

$y = \frac{0.2}{x-3} + 4$ HA: VA: :



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ANSWERS

For 1 to 3, write the equation of each transformation of the Parent Reciprocal function $y = \frac{1}{x}$

1. Moved 5 units left, twice as tall, branches are in quadrants I and III.

$y = \frac{2}{x+5}$

2. Moved 8 units up, half as tall, branches in quadrants II and IV.

$y = \frac{-.5}{x} + 8$

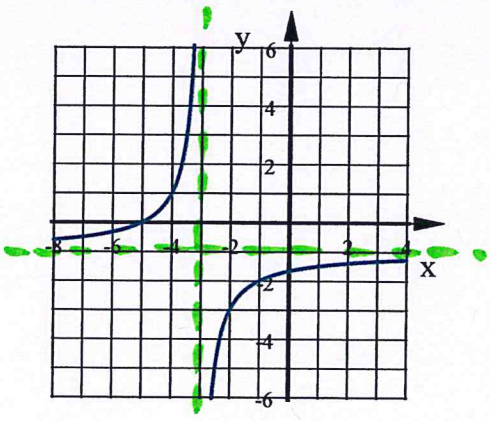
3. The Vertical Asymptote is $x = 3$, the Horizontal Asymptote is $y = -2$, and the branches are in quadrants II and IV.

3 RIGHT 2 DOWN

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

4. Write the equation of this graph which is a transformation of $y = \frac{2}{x}$

EQ: $y =$ $x = -3$ (3 LEFT)



$y = -1$ (1 DOWN)

Branches in Quadrants II & IV (x-axis reflection)

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

5. Graph this transformation of the parent reciprocal function. Show the asymptotes as dashed lines and state the equations of the asymptotes.

$y = \frac{0.2}{x-3} + 4$ (3 right, 4 up)

HA: $y = 4$ VA: $x = 3$

Branches in Quadrants I & III close to asymptotes