ALG BELLWORK TUESDAY, FEBRUARY 10, 2015

Graph each rational function showing all asymptotes, intercepts, and correct behavior around each asymptote.

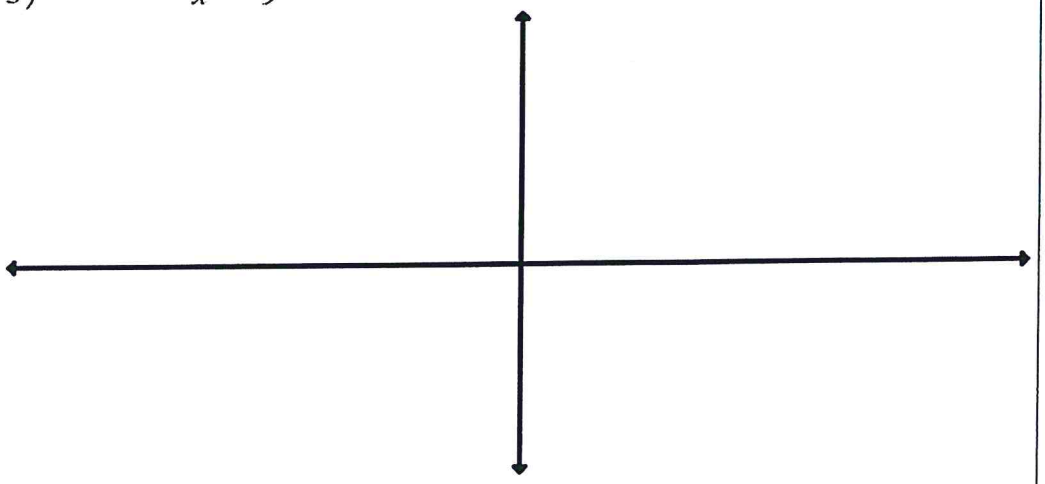
1. $y = \dfrac{-3(x+6)(x-2)}{(x+3)(x-3)} = \dfrac{-3x^2-12x+36}{x^2-9}$

HA:

VA:

y-int:

x-int:



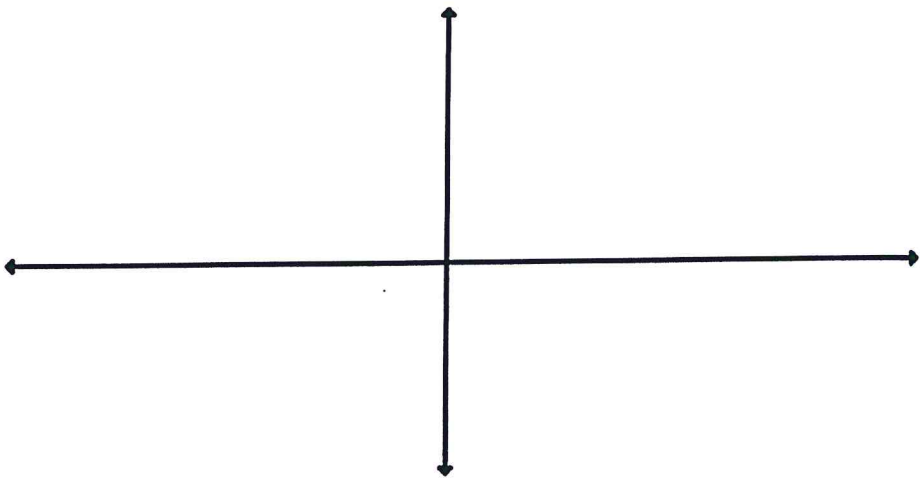
2. $y = \dfrac{x+5}{x^2-x-6} = \dfrac{x+5}{(x+2)(x-3)}$

HA:

VA:

y-int:

x-int:



ANSWERS

ALG BELLWORK TUESDAY, FEBRUARY 10, 2015

Graph each rational function showing all asymptotes, intercepts, and correct behavior around each asymptote.

1. $y = \dfrac{-3(x+6)(x-2)}{(x+3)(x-3)} = \dfrac{-3x^2-12x+36}{x^2-9}$

HA: $y=-3$

VA: $x=\pm 3$

y-int: -4

x-int: $-6, 2$

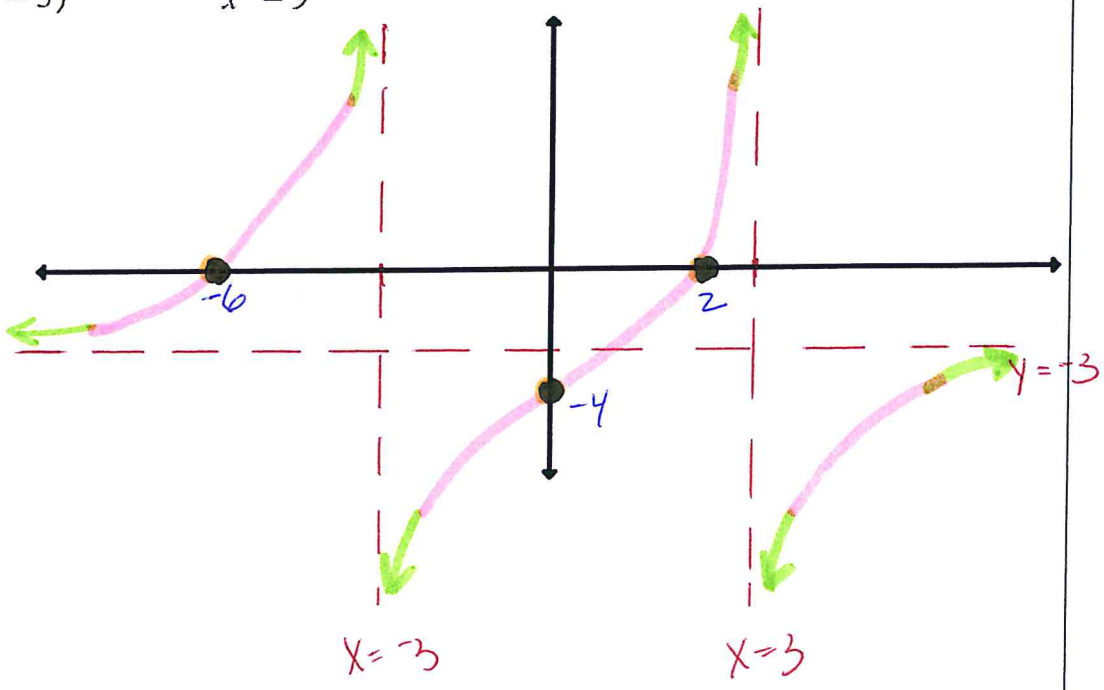
END BEHAVIOR

Left end

X	Y
-1000	-2.988 ABOVE

Right end

X	Y
1000	-3.012 BELOW



	X	Y
LEFT	-3.1	$\frac{-}{-}\frac{+}{-}\frac{-}{-}$ = (+) up
RIGHT	-2.9	$\frac{-}{+}\frac{+}{-}\frac{-}{-}$ = (−) DOWN

	X	Y
LEFT	2.9	$\frac{-}{+}\frac{+}{-}\frac{+}{+}$ = (+) up
RIGHT	3.1	$\frac{-}{+}\frac{+}{+}\frac{+}{+}$ = (−) DOWN

2. $y = \dfrac{x+5}{x^2-x-6} = \dfrac{x+5}{(x+2)(x-3)}$

HA: $y=0$

VA: $x=-2, 3$

y-int: $-\frac{5}{6}$

x-int: -5

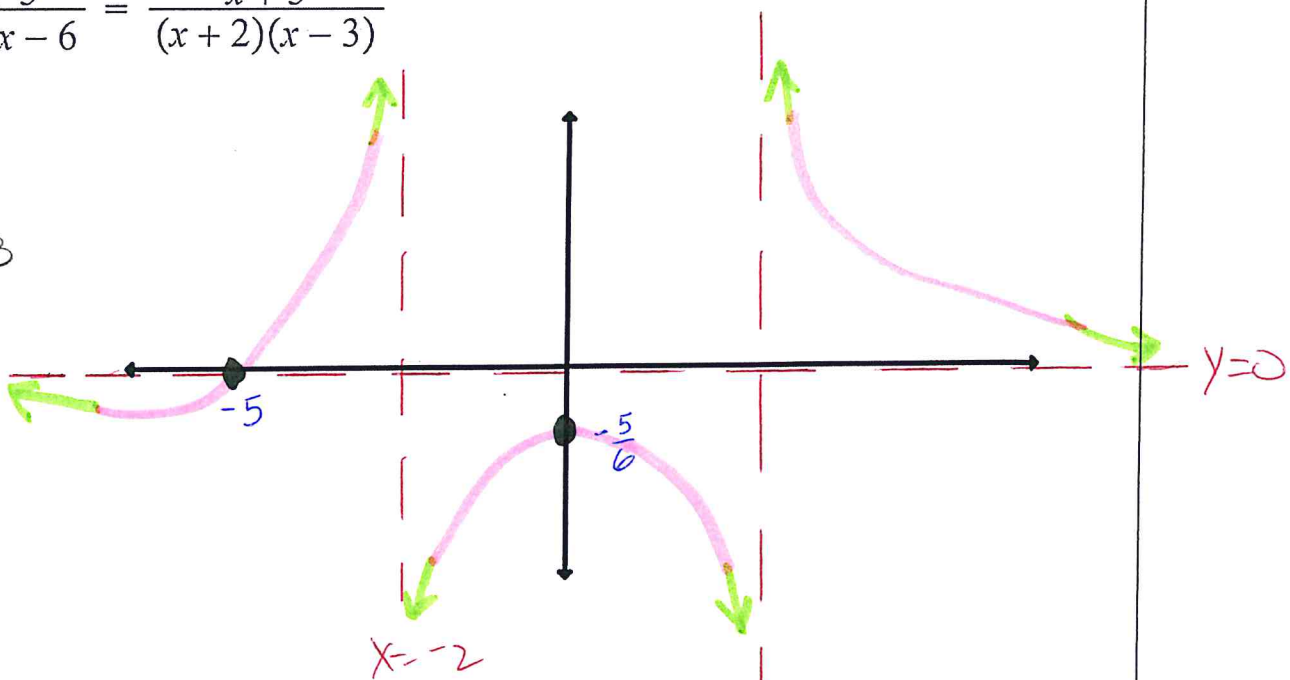
END BEHAVIOR

LEFT END

X	Y
-1000	-.00099 Below

RIGHT END

X	Y
1000	.001



	X	Y
Left	-2.1	$\frac{+}{-}\frac{}{-}$ = (+) up
RIGHT	-1.9	$\frac{+}{+}\frac{}{-}$ = (−) Down

	X	Y
LEFT	2.9	$\frac{+}{+}\frac{}{-}$ = (−) Down
RIGHT	3.1	$\frac{+}{+}\frac{}{+}$ = (+) up