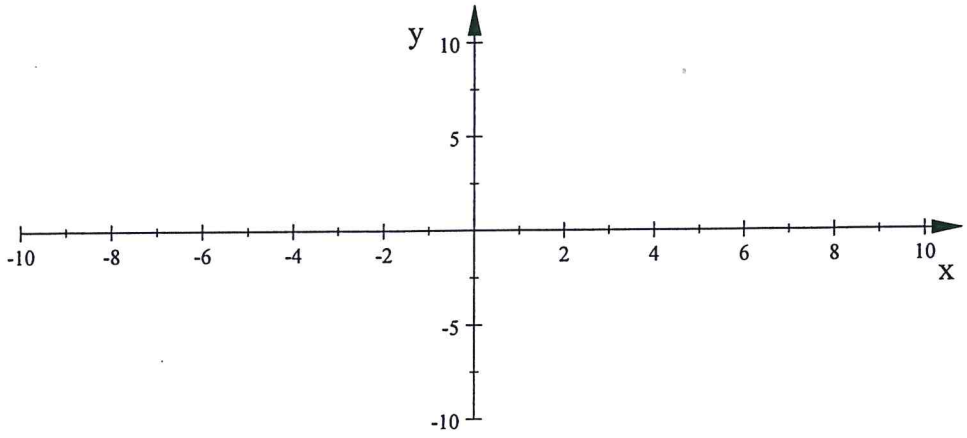
1. Graph this rational function showing all intercepts, asymptotes, and the correct behavior around each asymptote.

$$y = \frac{2(x-2)(x-7)}{(x-4)(x+3)} = \frac{2x^2-18x+28}{x^2-x-12}$$



2. Solve this equation. $\frac{2x}{x^2-1} = \frac{4}{x^2+2x-3}$

Algebra 2 Bellwork Thursday, February 11, 2016

ANSWERS

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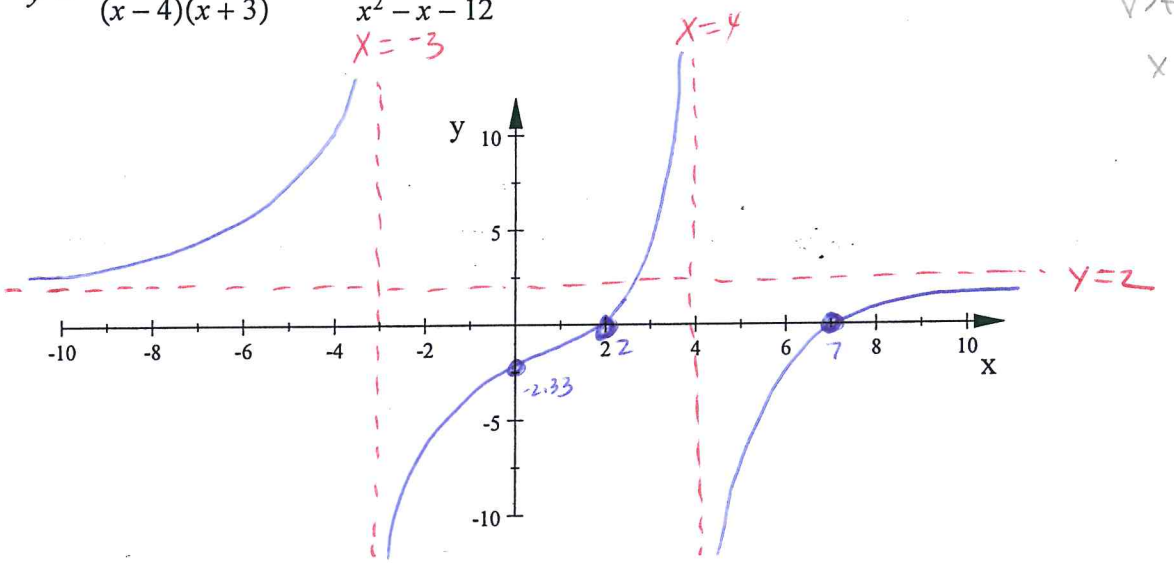
HA: $y=2$

VA: $x=-3, 4$

x-int: $x=2, 7$

y-int: $y=\frac{28}{-12} = -2.33$



2. Solve this equation. $\frac{2x}{x^2-1} = \frac{4}{x^2+2x-3}$

$\frac{(x+3)}{(x+3)} \cdot \frac{2x}{(x+1)(x-1)} = \frac{4}{(x+3)(x-1)} \cdot \frac{(x+1)}{(x+1)}$

$2x^2+6x = 4x+4$

$2x^2+2x-4=0$

$2(x^2+x-2)=0$

$2(x+2)(x-1)=0$

$x=-2, 1$

$x=-2$