March 31, 2011

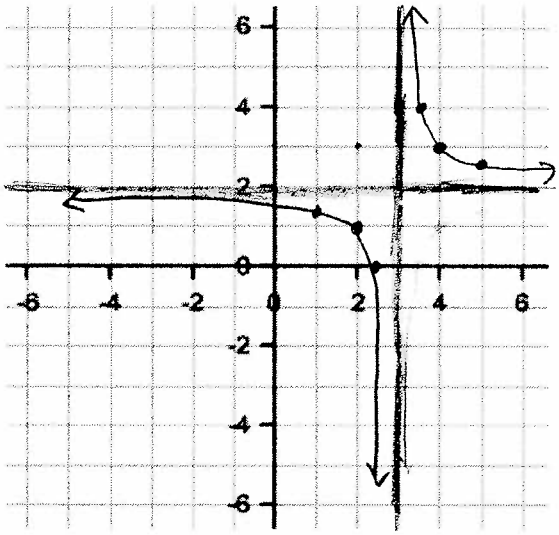
Diagnostic "Quiz": Are you Ready for Tomorrow?

Answers

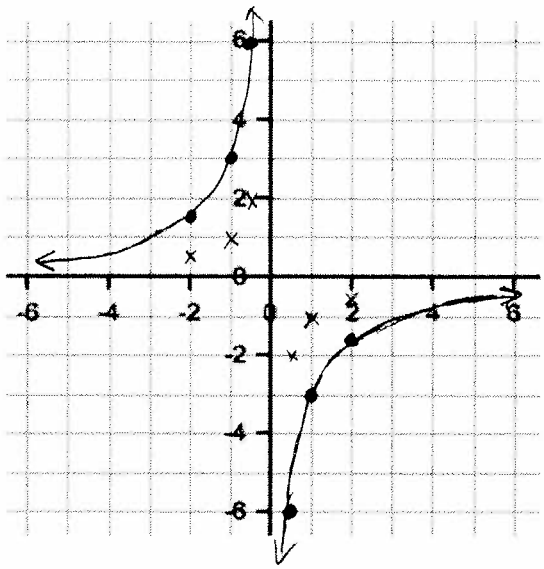
Could you answer each of these questions? This is a *sample* of what you may encounter tomorrow on the quiz.

1. Please graph each of the following functions on the grid provided. Pay close attention to the asymptotes of your graph.

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

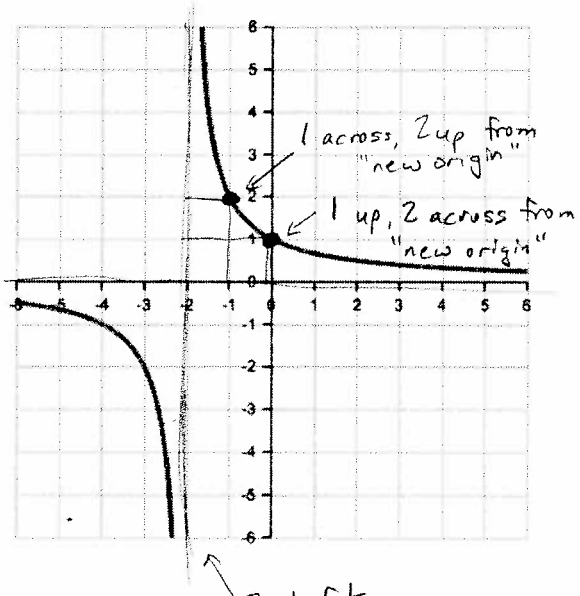


b) $y=-\frac{3}{x}$

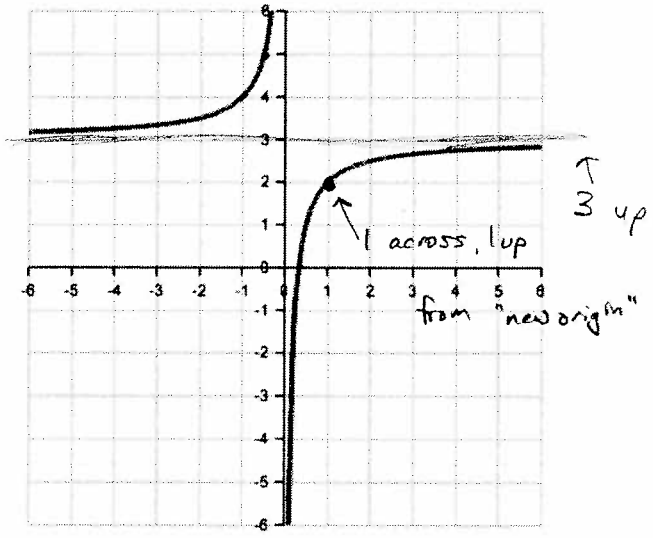


2. Please give an equation that represents each of the following graphs:

a) $y=\frac{2}{x+2}$



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



NEGATIVE because it's in the top left & bottom right corners

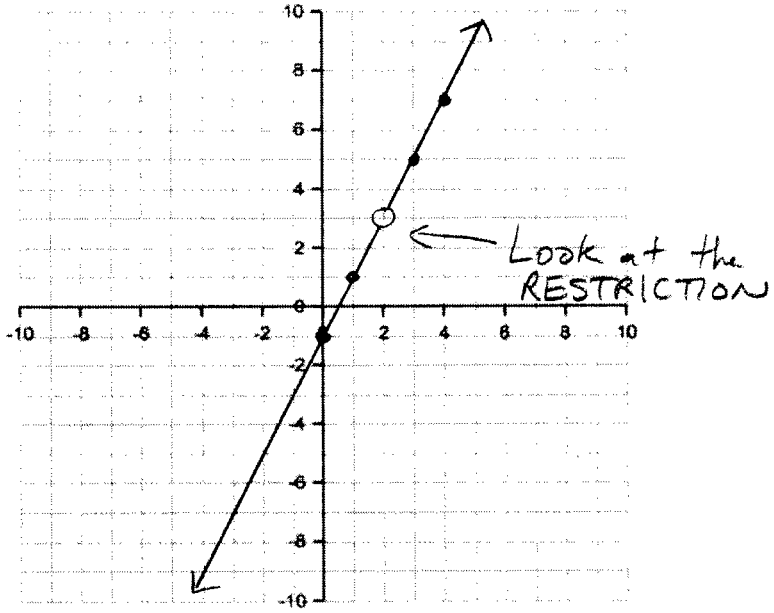
3. Simplify each of the following rational expressions. Don't forget restrictions! Then, draw the graph of each, remembering the special way we have of showing restrictions.

a) $y=\dfrac{(2x-1)(x-2)}{x-2}$

$=2x-1$

Restrictions: $x-2\neq 0$

$\Rightarrow x\neq 2$



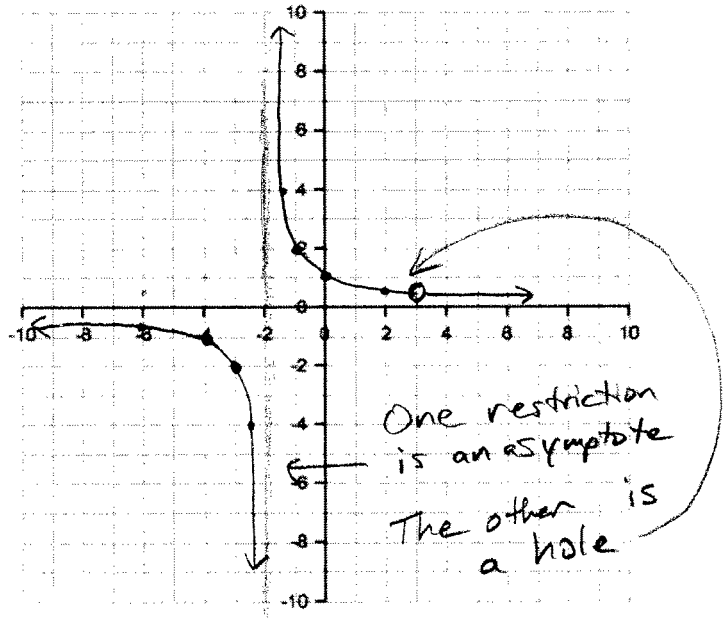
b) $y=\dfrac{2(x-3)}{x^2-x-6}$

$=\dfrac{2(x-3)}{(x-3)(x+2)}$ factor

$=\dfrac{2}{x+2}$

Restrictions: $x-3\neq 0$ $\quad x+2\neq 0$

$x\neq 3$ $\quad x\neq -2$



4. Simplify each of the following radical expressions as much as possible.

a) $2\sqrt{9}$

$=2(3)$

$=6$

b) $\sqrt{800}$

$=\sqrt{8}\sqrt{100}$

$=\sqrt{4}\sqrt{2}\sqrt{100}$

$=(2)\sqrt{2}(10)$

$=20\sqrt{2}$

c) $2\sqrt{3}+\sqrt{12}$

$=2\sqrt{3}+\sqrt{4}\sqrt{3}$

$=2\sqrt{3}+2\sqrt{3}$

$=4\sqrt{3}$