Algebra 2
Review 8.1-8.3

MCT 8.1-8.3 tomorrow

Example 1

Simplify $\frac{4a}{3b} \cdot \frac{9b^4}{2a^2}$.

$$\frac{\cancel{2}\cancel{4}a \cdot \cancel{3}\cancel{3}\cancel{4}bbb}{\cancel{3}\cancel{4}\cancel{2}aa}$$

$$\frac{6b^3}{a}$$

Example 2

Simplify $\frac{r^2+5r}{2r} \div \frac{r^2-25}{6r-12}$.

$$\frac{r(r+5)}{r^2+5r} \cdot \frac{6(r-2)}{6r-12}$$

$$\frac{2r}{r^2-25}$$

$$(r-5)(r+5)$$

$$\frac{6(r-2)}{2(r-5)} \quad \frac{3(r-2)}{r-5}$$

Example 3

Simplify $\frac{3a}{a^2-4} - \frac{2}{a-2}$.

$(a+2)(a-2)$

$\frac{a+2}{a+2}$

$= \frac{3a}{(a+2)(a-2)} + \frac{-2(a+2)}{(a+2)(a-2)}$

$= \frac{a-4}{(a+2)(a-2)}$

22. $\dfrac{\frac{3}{2x+3}-\frac{x}{x+1}}{\frac{2x}{x+1}+\frac{5}{2x+3}}$

$\dfrac{3x+3}{(2x+3)(x+1)} + \dfrac{-2x^2+3x}{(2x+3)(x+1)} \quad \dfrac{-2x^2+6x+3}{(2x+3)(x+1)}$

$\dfrac{x^2+6x}{(x+1)(2x+3)} + \dfrac{5x+5}{(x+1)(2x+3)} \quad \dfrac{4x^2+11x+5}{(2x+3)(x+1)}$

$\left(\dfrac{-2x^2+6x+3}{(2x+3)(x+1)}\right) \cdot \left(\dfrac{(2x+3)(x+1)}{4x^2+11x+5}\right)$

$\dfrac{-2x^2+6x+3}{4x^2+11x+5}$

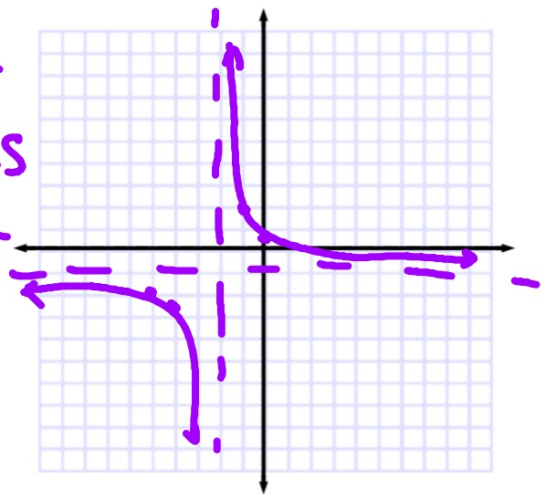
Example 4

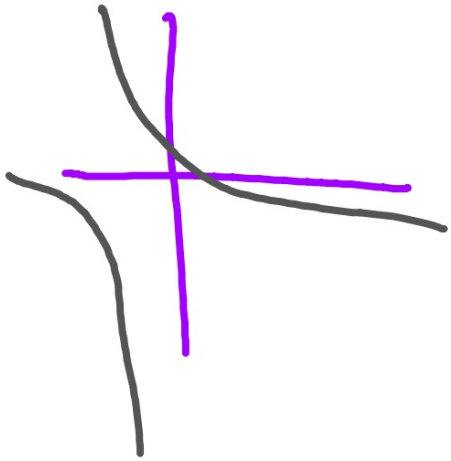
Graph $f(x) = \frac{3}{x+2} - 1$. State the domain and range.

D ARN $x \neq -2$

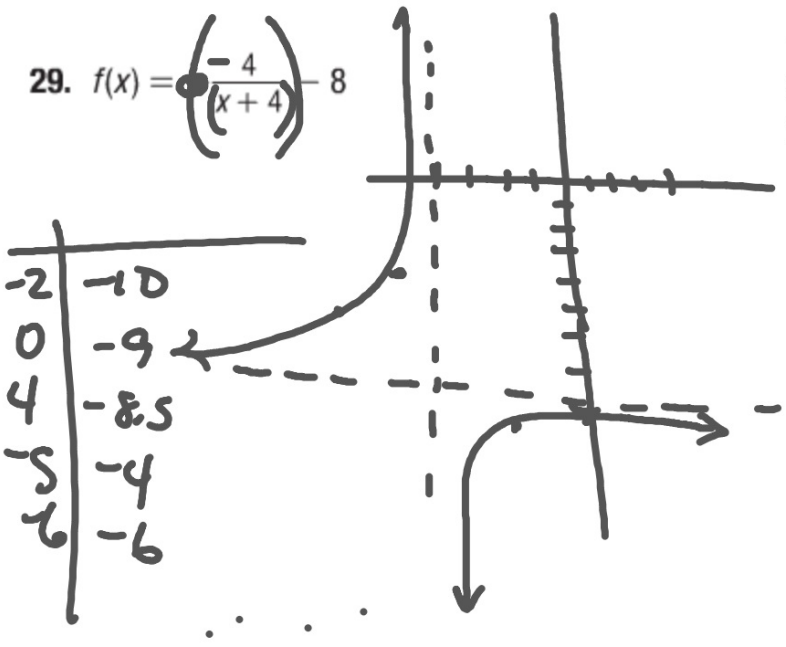
R ARN $y \neq -1$

0	$\frac{3}{2} - 1$	.5
-1	$\frac{3}{1} - 1$	2
-4	$\frac{3}{-2} - 1$	-2.5
-5	$\frac{3}{-3} - 1$	-2





29. $f(x) = \left(\frac{-4}{(x+4)}\right) - 8$



1. Analyze (parent graph)
2. Sketch
3. Use technology (table)

PSS2
odds + 10, 12, 14