4.5 HW

- **3-102.** Estacia wants to learn more about excluded values. Homework Help ✎

  a. Explain to Estacia why x cannot be 4 in the expression $\frac{x+2}{x-4}$.

  b. Find the excluded values of x in each of the expressions of problem 3-99.

  c. Create an expression that has the excluded values of $x \neq -6$ and $x \neq \frac{1}{3}$. Be prepared to share your expression to the class.

- **3-103.** Use the methods developed in class to add or subtract the following rational expressions. Be sure to look for factors before trying to determine a common denominator, and simplify your answers, if possible. Homework Help ✎

a. $\frac{4x}{x^2-2x-8}+\frac{4}{x-4}$

b. $\frac{16x-12}{4x^2+5x-6}-\frac{3}{x+2}$

3-105. Simplify the rational expressions below as much as possible. Homework Help ✎

a. $\frac{(x-4)^3(2x-1)}{(2x-1)(x-4)^2}$

b. $\frac{7m^2-22m+3}{3m^2-7m-6}$

c. $\frac{(z+2)^9(4z-1)^7}{(z+2)^{10}(4z-1)^5}$

d. $\frac{(x+2)(x^2-6x+9)}{(x-3)(x^2-4)}$

- **3-107.** Multiply or divide the expressions below. Leave your answers as simplified as possible. Homework Help ✎

a. $\frac{(3x-1)(x+7)}{4(2x-5)} \cdot \frac{10(2x-5)}{(4x+1)(x+7)}$

b. $\frac{(m-3)(m+11)}{(2m+5)(m-3)} \div \frac{(4m-3)(m+11)}{(4m-3)(2m+5)}$

c. $\frac{2p^2+5p-12}{2p^2-5p+3} \cdot \frac{p^2+8p-9}{3p^2+10p-8}$

d. $\frac{4x-12}{x^2+3x-10} \div \frac{2x^2-13x+21}{2x^2+3x-35}$