

68.
$$\frac{x^5 - 13x^4 - 120x + 80}{x + 3}$$

-3
$$\begin{array}{r} 1 \quad -13 \quad 0 \quad 0 \quad -120 \quad 80 \\ \downarrow \\ -3 \quad 48 \quad -144 \quad 432 \quad -936 \end{array}$$

$$\begin{array}{r} 1 \quad -16 \quad 48 \quad -144 \quad 312 \quad -856 \\ x^4 \quad x^3 \quad x^2 \quad x \quad C \quad R \end{array}$$

$$x^4 - 16x^3 + 48x^2 - 144x + 312 + \frac{-856}{x+3}$$

7.5 Solving rational equations.

1. Find the LCM of the denominators
2. multiply each term by the LCM
3. solve, & must check your answer

Ex:

$$\frac{22}{17} \left(\frac{X}{6} \right) - (7)^{12} = \left(\frac{X}{12} \right)^{12}$$

$$\frac{22}{17} X - 84 = -X$$

$$X - 84 = 0$$

$$+84 \quad +84$$

$$X = 84$$

$$\left(\frac{7}{x}\right)^{3x} - \left(\frac{1}{3x}\right)^{3x} = \left(\frac{8}{3}\right)^{3x}$$

$$\cancel{x}, \cancel{3x}, \cancel{3}$$
$$3x$$

$$21 - 1 = 8x$$

$$\frac{20}{8} = \frac{8x}{8}$$

$$x = \frac{5}{2}$$

$$\frac{5x}{x-2} = \frac{7(x-2)}{x-2} + \frac{10(x-2)}{x-2}$$

$$5x = 7x - 14 + 10$$

$$\begin{array}{r} 5x = 7x - 4 \\ -7x \quad -7x \\ \hline \end{array}$$

$$\begin{array}{r} -2x = -4 \\ \underline{-2} \quad \underline{-2} \\ x = 2 \end{array}$$

No solution

HW: p. 474

14-44 even