

- Solving Rational Equations:
Steps
- 1) Find the LCD (Least Common Denominator)
 - 2) Multiply every term by the LCD
 - 3) Solve the equation
 - 4) Check for extraneous answers.
Extraneous \rightarrow The denominator of the original Eq = 0.

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$$1) \frac{3}{m^2} = \frac{3(m-4)}{3m^2} + \frac{2}{3m^2} \quad \text{LCD} = 3m^2$$

$$9 = m - 4 + 2$$

$$9 = m - 2$$

$$\begin{array}{r} +2 \\ +2 \end{array}$$

$$\boxed{11 = m}$$

$$\frac{x-6}{x} = \frac{x+4}{x} + (1)$$

$$x-6 = x+4+x$$

$$x-6 = 2x+4$$

$$\begin{array}{r} -x \\ -x \end{array}$$

$$\begin{array}{r} -6 = x+4 \\ -4 \quad -4 \\ \hline -10 = x \end{array}$$

$$\frac{1}{5x} = \frac{1}{5n} + \frac{n-1}{5n}$$

$$5 = 1 - (n-1)$$

$$5 = 1 - n + 1$$

$$5 = 2 - n$$

$$\begin{array}{r} -2 \\ -2 \end{array}$$

$$(-1)(3) = (-n)(-1)$$

$$\boxed{-3 = n}$$

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Radical Equations

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

$$x = 100$$

$$12) \frac{-10 - \sqrt{v-10}}{-10} = \frac{-60}{-10}$$

$$(\sqrt{v-10})^2 = (6)^2$$

$$\begin{array}{r} v-10 = 36 \\ +10 = +10 \\ \hline v = 46 \end{array}$$

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Solving Radical Equations

- 1) Isolate the Radical
- 2) Square both sides
- 3) Solve for the variable.
- 4) check for extraneous answers.

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