6.6 Solving Rational Equations

Section 6.6: Solving Rational Equations

Objectives:
- Solve rational equations containing constant denominators.
- Solve rational equations containing variable denominators.

\[
\frac{2x}{x+1} + \frac{3}{x-2} = 2
\]

Examples

a) \( \frac{1}{3} + \frac{x}{10} = -1 \)

b) \( \frac{3}{2x} + \frac{1}{5x} = 6 \)
EXAMPLES

a) \[ \frac{3x}{x - 2} + \frac{4}{x^2 - 4} = -1 \]

b) \[ \frac{3x}{x + 5} = 8 - \frac{15}{x + 5} \]

EXAMPLES

a) \[ \frac{2}{x^2 + 2x - 8} - \frac{1}{x^2 + 9x + 20} = \frac{4}{x^2 - 3x - 10} \]

b) \[ \frac{12}{x + 5} + \frac{5}{x} = \frac{20}{x} \]