

Solve each equation. Be sure to list the domain restrictions. Remember to check for extraneous solutions!

Part A

<p>1. $\frac{-2}{x+3} + \frac{3}{x-2} = \frac{5}{x^2+x-6}$</p> <p>Factored Form:</p> <p>Restrictions: $x \neq$</p> <p>LCD:</p> <p>Solve:</p> <p>$x =$</p> <p>Check:</p>	<p>2. $\frac{7}{x+3} = \frac{8}{x-2}$</p> <p>Factored Form:</p> <p>Why can we skip this step for this problem?</p> <p>Restrictions: $x \neq$</p> <p>LCD:</p> <p>Solve:</p> <p>$x =$</p> <p>Check:</p>
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Part B

<p>3. $\frac{12}{x+5} = -2$</p>	<p>4. $\frac{x-5}{3} = \frac{x-38}{12} - \frac{x}{4}$</p>
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$$5. \frac{x^2 - 5x}{4} = \frac{8x}{2}$$

$$6. \frac{1}{x-5} = \frac{5}{x^2 + 2x - 35}$$

$$7. \frac{5}{x} = 25 + \frac{5}{x}$$

$$8. \frac{1}{x^2} + \frac{1}{x} = \frac{1}{2x^2}$$

Pact C (Honors)

$$9. \frac{3}{x^2 + 2x} = \frac{6}{x^2}$$

$$10. \frac{x+3}{x^2-1} + \frac{-2x}{x-1} = 1$$