12-6 Solving Rational Equations

1. Find the ***least common denominator*** (LCD) for the problem.
2. Multiply ***EACH*** term by the LCD
3. Solve
4. Check

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1 EXAMPLE Solving Equations With Rational Expressions

Solve $\frac{1}{2x} + \frac{3}{10} = \frac{1}{5x}$. Check the solution.

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b) $\frac{4}{c} = \frac{3}{2c} - \frac{1}{5}$

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1 TRY $\frac{1}{3} + \frac{1}{3x} = \frac{1}{6}$ *clicker

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Applications:

Ex2) **Volunteerism** Max can wash and wax a car in 60 min. His older sister Kayla can do the same job in 45 min. How long will the car take them if they work together?

fraction of job Max can do in 1 minute	+	fraction of job Kayla can do in 1 minute	=	fraction of job completed in 1 minute
$\frac{1}{60}$	+	$\frac{1}{45}$	=	$\frac{1}{m}$

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Ex 2b) Peggy can pick a bushel of apples in 45 minutes. Paul can pick a bushel of apples in 1 hour and 15 minutes. How long will it take them to pick a bushel if they work together?

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2

*clicker

Try #2) Renee can mow the lawn in 20 minutes. Joanne can do the same job in 30 minutes. How long will it take them if they work together?

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