

12-7 Solving Rational Equations
Same as yesterday! You can continue on the same page of your notes.

Review:
(Left page)

1. Solve $\frac{24}{x-7} = \frac{3}{x}$. Check your answer.
 $24x = 3x - 21$

2. Solve $\frac{x-4}{8} = \frac{x}{8}$. Check your answer.
 $x-4 = x$

May 14-9:52 AM

Watch...

Solve each equation. Check your answer.

3. $\frac{4}{x} - \frac{3}{x^2} = \frac{1}{x^2}$ CD: x^2 $x \neq 0$
 $4x - 3 = x^2$
 $-4x + 3 = x^2 - 4x + 3$
 $0 = x^2 - 4x + 3$
 $(x-3)(x-1)$
 $x=3$ $x=1$

Step 2 Multiply both sides by the LCD

Step 1 Find the LCD

Step 3 Simplify and solve. $\frac{4}{x} - \frac{3}{x^2} = \frac{1}{x^2}$

Check Verify that your solution is not extraneous.

May 14-10:04 AM

Write the steps in your notes:

Step 1 Find the LCD

Step 2 Multiply both sides by the LCD

Step 3 Simplify and solve.

Check Verify that your solution is not extraneous.

May 4-10:59 AM

Solve each equation. Check your answer.

4. $\frac{5n}{n-3} = \frac{8}{1} + \frac{15}{n-3}$ CD: $n-3$ $n \neq 3$
 $5n = 8n - 24 + 15$
 $-3n = -9$
 $n = 3$

5. $\frac{2}{a+1} + \frac{1}{a+1} = \frac{4}{a}$

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Solve each equation. Check your answer.

6. $\frac{8}{x+3} = \frac{1}{x} + \frac{1}{x(x+3)}$ CD: $x(x+3)$
 $8x = x + 3 + \frac{1}{x} + \frac{1}{x+3}$
 $0 = x^2 - 4x + 3$
 $(x-3)(x-1)$
 $x=3$ $x=1$

$x \neq 0$
 $x \neq -3$

$x - 3 = 0$
 $+3$
 $x = 3$

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Solve each equation. Check your answer.

7. $\frac{6}{j+2} + \frac{16}{j} = \frac{4}{2j}$ CD: $2j(j+2)$
 $12j - 20j - 40 = 4j + 8$
 $-8j - 40 = 4j + 8$
 $-12j = 48$
 $j = -4$

$j \neq -2$
 $j \neq 0$

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Assignment: Worksheet

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CD: —

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