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KEY

HW Worksheet 1.6
Solving Rational Equations – Acc. Algebra 2

Solve. Check for extraneous solutions.

1. $\frac{9}{3x} = \frac{4}{x+2}$

$x = 6$

2. $\frac{8}{3x-2} = \frac{2}{x-1}$

$x = 2$

3. $\frac{x-3}{x+5} = \frac{x}{x+2}$

$x = -1$

4. $\frac{4(x-4)}{x^2 - 2x - 8} = \frac{4}{x+4}$

$x^2 - 2x - 8$

NO
SOLUTION

5. $\frac{2}{3x} + \frac{1}{6} = \frac{4}{3x}$

$x = 4$

6. $\frac{1}{2x} + \frac{3}{x+7} = \frac{-1}{x}$

$x = -\frac{7}{3}$

$$7. \frac{5}{x^2+x-6} = 2 + \frac{x-3}{x-2}$$

$$x = \frac{-2 \pm \sqrt{316}}{6}$$

$$8. \frac{2}{x-3} + \frac{1}{x} = \frac{x-1}{x-3}$$

$$x = 1$$

$$9. \frac{10}{x} + 3 = \frac{x+9}{x-4}$$

$$x = -\frac{5}{2}, x = 8$$

$$10. \frac{x+3}{x-3} + \frac{x}{x-5} = \frac{x+5}{x-5}$$

$$x = 0, x = 7$$