# Rational Equations Answer Key

## *They Never Act Erratically*

Solve the following rational equations.

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

   $x = \frac{7}{2}$

2. $\frac{2x+3}{x-1} - \frac{x-1}{2} = 0$

   $x = 7$

3. $\frac{2x+3}{3} = \frac{x^2-4}{(2+x)(x-2)}$

   $x = 0$

4. $\frac{5z^2-6}{25z^2-8} = \frac{1}{5}$

   No solution

5. $\frac{1}{x+4} + \frac{1}{x-4} = 0$

   $x = 0$

6. $\frac{1}{x-3} = \frac{x+3}{x^2-9}$

   All real numbers except $\pm 3$

7. $\frac{3x^2-10}{3x+5} - \frac{2x^3+7}{3x+5}$

   $\frac{3x^2-2x^3-17}{3x+5}$

8. $\frac{1}{x^2-16} - \frac{1}{x+4} = 0$

   $x = 5$

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

   No solution

10. $\frac{x^2+5x+6}{2x^2+11x-6} = \frac{x+2}{x+6}$

    $x = 4$

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