




## Rational Equations

 Solve each equation. Remember to check for extraneous solutions.

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

13)  $\frac{3x-2}{9x+1} = \frac{2x-5}{6x-5}$

2)  $\frac{3}{x-2} = \frac{2x}{x-2}$

14)  $\frac{1}{n^2} + \frac{1}{n} = \frac{1}{2n^2}$

3)  $\frac{4}{b-7} = \frac{-2b}{b+3}$

15)  $\frac{1}{8b^2} = \frac{1}{4b^2} - \frac{1}{b}$

4)  $\frac{9}{n+1} = \frac{n}{n-1}$

16)  $\frac{1}{n-8} - 1 = \frac{7}{n-8}$

5)  $\frac{x}{4} = \frac{x+2}{6}$

17)  $\frac{5}{r-2} = -\frac{10}{r+2} + 7$

6)  $\frac{2-x}{1-x} = \frac{12}{4-x}$

18)  $1 = \frac{1}{x^2+2x} + \frac{x-1}{x}$

7)  $\frac{2}{x^2-x} = \frac{1}{x-1}$

19)  $\frac{1}{x} = 8 + \frac{6}{9x}$

8)  $\frac{5x}{2x^2-4} = \frac{10}{x-5}$

20)  $\frac{x+5}{x^2-2x} - 1 = \frac{1}{x^2-2x}$

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

21)  $\frac{x-2}{x+3} - 1 = \frac{1}{x+2}$

10)  $\frac{1}{x} = \frac{6}{5x} + 1$

22)  $\frac{1}{6x^2} = \frac{1}{3x^2} - \frac{1}{x}$

11)  $\frac{x+6}{x+3} = \frac{x+6}{x+1}$

23)  $\frac{x+5}{x^2-x} = \frac{1}{x^2+x} - \frac{x-6}{x+1}$

12)  $\frac{1}{6b^2} + \frac{1}{6b} = \frac{1}{b^2}$

24)  $1 = \frac{1}{x^2-2x} + \frac{x-1}{x}$