

Practice

Solve each equation. Remember to check for extraneous solutions.

1)
$$\frac{4}{k^2 - 6k} + \frac{4}{k} = \frac{1}{k}$$

2)
$$\frac{1}{r^2 - 5r} = \frac{1}{r - 5} - \frac{3}{r^2 - 5r}$$

3)
$$\frac{1}{x^2 + 8x + 15} - \frac{6}{x + 3} = \frac{3}{x^2 + 8x + 15}$$

4)
$$\frac{a + 5}{a^2 - 11a + 30} = \frac{1}{a - 5} + \frac{a + 3}{a^2 - 11a + 30}$$

5)
$$\frac{4}{x^2 - 2x} = \frac{1}{x} - \frac{1}{x^2 - 2x}$$

6)
$$\frac{n}{n^2 + 3n - 18} = \frac{5}{n^2 + 3n - 18} - \frac{2}{n - 3}$$

$$7) \frac{x^2 + 5x - 6}{x^2 + 4x} + \frac{1}{x^2 + 4x} = \frac{1}{x + 4}$$

$$8) \frac{r - 3}{r + 1} = \frac{r - 1}{r + 1} + \frac{1}{r^2 + r}$$

$$9) \frac{1}{m^2 + 3m} = \frac{5m - 10}{2m + 6} + \frac{1}{2m + 6}$$

$$10) \frac{n}{n + 3} = \frac{n + 1}{n + 3} + \frac{1}{n}$$