

1. Solve the following radical equations.

(a) $\sqrt{4x - 6} = \sqrt{5x + 4}$

(b) $\sqrt{3x - 6} - \sqrt{5x - 7} = 0$

(c) $\sqrt{3x + 8} = \sqrt{4x + 8}$

(d) $\sqrt{2x + 3} = \sqrt{4x^2 + 1}$

(e) $\sqrt{5x + 8} = \sqrt{7 - x}$

(f) $\sqrt{2x + 2} - \sqrt{3x^2 + 6} = 0$

(g) $\sqrt{3x + 1} - \sqrt{x + 1} = 2$

(h) $\sqrt{4x - 1} = \sqrt{x^2}$

(i) $\sqrt{x^2 + 2} = \sqrt{2x + 5}$

(j) $\sqrt{2x + 4} = \sqrt{5x - 2}$

(k) $x - \sqrt{7x - 12} = 0$

(l) $2x + 3 = \sqrt{x^2 - 10x + 25}$

Answers

1. (a) $x = -10$

(c) $x = 0$

(e) $x = -\frac{1}{6}$

(g) $x = 8$

(i) $x = -1, x = 3$

(k) $x = 3, x = 4$

(b) $x = \frac{1}{2}$

(d) $x = -\frac{1}{2}, x = 1$

(f) No solution.

(h) $x = -\sqrt{3} + 2, x = \sqrt{3} + 2$

(j) $x = 2$

(l) $x = \frac{2}{3}$