

Solving Equations with Powers & Roots

Solve

- (a) $x^2 = 9$ (b) $x^2 = 12.25$
(c) $x^2 = 64$ (d) $x^3 = 64$
(e) $27 = x^3$ (f) $x^3 = -8$

- (a) $x = \pm 3$ (b) $x = \pm 3.5$
(c) $x = \pm 8$ (d) $x = 4$
(e) $x = 3$ (f) $x = -2$

Solve

- (a) $\sqrt{x} = 4$ (b) $\sqrt{x} = -4$
(c) $9 = \sqrt{x}$ (d) $\sqrt[3]{x} = 3$
(e) $\sqrt[3]{x} = -2$ (f) $\sqrt[3]{x} = 7.5$

- (a) $x = 16$ (b) $x = 16$
(c) $x = 81$ (d) $x = 27$
(e) $x = -8$ (f) $x = 421.875$

Solve

- (a) $10 + x^2 = 26$
(b) $x^2 - 24 = 120$
(c) $x^3 - 3 = 24$
(d) $18 + x^3 = 10$
(e) $2x^2 - 5 = 13$
(f) $50 + 7x^2 = 78$
(g) $5x^3 + 7.4 = 12.4$
(h) $1 - 2x^3 = 129$

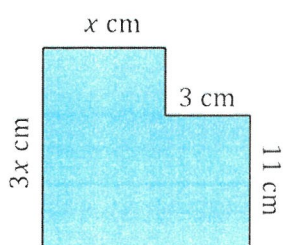
- (a) $x = \pm 4$
(b) $x = \pm 12$
(c) $x = 3$
(d) $x = -2$
(e) $x = \pm 3$
(f) $x = \pm 2$
(g) $x = 1$
(h) $x = -4$

Solve

- (a) $8 + \sqrt{x} = 11$
(b) $\sqrt[3]{x} - 5 = 2$
(c) $4\sqrt{x} + 25 = 5$
(d) $47 - 3\sqrt[3]{x} = 17$
(e) $6 = 3\sqrt{x} - 1.5$

- (a) $x = 9$
(b) $x = 343$
(c) $x = 25$
(d) $x = 1000$
(e) $x = 6.25$

Given that the area of the shape shown is 108 cm^2 , form an equation in x and use it to find the value of x .



$$3x^2 + 33 = 108$$

$$3x^2 = 75$$

$$x^2 = 25$$

$$x = \pm 5$$

but $x > 0$ so $x = 5$