

Solve Quadratics

Solve the following equations. Show your work.

a) $7x^2 + 2x = 0$

b) $7x^2 + 2x - 5 = 0$

c) $b^2 + 5b - 35 = 3b$

d) $6r^2 - 12r = 1$

e) $2x^2 + 11x = x^2 - x - 32$

e) $(x - 5)(x - 6) = 2$

Solve Quadratics

Solve the following equations. Show your work.

a) $7x^2 + 2x = 0$

$$\begin{aligned}x(7x + 2) &= 0 \\x &= 0 \text{ or } -\frac{2}{7}\end{aligned}$$

b) $7x^2 + 2x - 5 = 0$

$$\begin{aligned}(7x - 5)(x + 1) &= 0 \\x &= \frac{5}{7} \text{ or } -1\end{aligned}$$

c) $b^2 + 5b - 35 = 3b$

$$\begin{aligned}b^2 + 2b - 35 &= 0 \\(b + 7)(b - 5) &= 0 \\b &= -7 \text{ or } 5\end{aligned}$$

d) $6r^2 - 12r = 1$

$$\begin{aligned}6r^2 - 12r - 18 &= 0 \\6(r - 3)(r + 1) &= 0 \\r &= 3 \text{ or } -1\end{aligned}$$

e) $2x^2 + 11x = x^2 - x - 32$

$$\begin{aligned}x^2 + 12x + 32 &= 0 \\(x + 8)(x + 4) &= 0 \\x &= -8 \text{ or } -4\end{aligned}$$

e) $(x - 5)(x - 6) = 2$

$$\begin{aligned}x^2 - 11x + 30 &= 2 \\x^2 - 11x + 28 &= 0 \\(x - 7)(x - 4) &= 0 \\x &= 7 \text{ or } 4\end{aligned}$$