

Solving Quadratics

1. Solve each equation.

a) $x(x + 4) = 0$

b) $(x + 10)(x + 8) = 0$

c) $(x - 5)^2 = 0$

2. Determine whether the given value is a root of the equation.

a) $x = 2$, $x^2 + x - 6 = 0$

b) $x = 4$, $x^2 + 7x - 8 = 0$

3. Solve each equation.

a) $x^2 + 2x - 15 = 0$

b) $x^2 + 4x + 4 = 0$

c) $x^2 - 6x = 16$

d) $3x^2 = 5x + 2$

e) $x^2 - 25 = 0$

f) $9x^2 + 1 = 6x$

4. Conor has a summer lawn-mowing business. Based on experience Conor knows that

$P = -5x^2 + 200x - 1500$ models his profit, P , in dollars, where x is the amount, in dollars, charged per lawn.

a) How much does he need to charge if he wants to break even?

b) How much does he need to charge if he wants to have a profit of \$500?