Problem Set

Factor and solve each quadratic equation. Check your answer.

1. $x^2 + 5x + 6 = 0$

$x^2 + 5x + 6 = 0$

$(x + 3)(x + 2) = 0$

$x + 3 = 0$ or $x + 2 = 0$

$x = -3$ or $x = -2$

The roots are -3 and -2.

Check:

$(-3)^2 + 5(-3) + 6 = 0$ $\qquad$ $(-2)^2 + 5(-2) + 6 = 0$

$9 - 15 + 6 = 0$ $\qquad$ $4 - 10 + 6 = 0$

$0 = 0$ $\qquad$ $0 = 0$

2. $x^2 - 3x - 4 = 0$

3. $m^2 + 2m - 35 = 0$

4. $-x^2 - 4x + 12 = 0$

5. $x^2 + 8x = 0$

6. $w^2 + 50 = -15w$

7. $-t^2 + 12t = 32$

8. $x^2 + 2x + 2 = 0$

9. $2t^2 + t - 3 = 0$

10. $w^2 + 5w - 32 = 2w - 4$