

Solve each of the following by completing the square and square root.

1. $x^2 - 6x = -9$

2. $x^2 + 12x + 36 = -17$

3. $x^2 - 16x = -15$

4. $2x^2 - 12x = -10$

5. $3x^2 - 12x - 84 = 9$

6. $5x^2 - 20x - 3 = -38$

7. $6x^2 + 12x + 4 = -8$

8. Describe the characteristics of the structure of a quadratic equation that would lend itself to being solved efficiently by completing the square.