

4-6: The Quadratic Formula and the Discriminant (Practice)

Solve each equation by using the Quadratic Formula.

1. $4x^2 - 9 = 0$

5. $3x^2 = -54$

2. $x^2 - 21 = 4x$

6. $4x^2 - 4x + 17 = 0$

3. $3x^2 - 13x + 4 = 0$

7. $8x - 1 = 4x^2$

4. $x^2 - 14x + 53 = 0$

8. $x^2 = 4x - 15$

4-6: The Quadratic Formula and the Discriminant (Practice)**Complete parts a–c for each quadratic equation.**

13. $5x^2 - 2x + 4 = 0$

- Find the value of the discriminant.
- Describe the number and type of roots.
- Find the exact solutions by using the Quadratic Formula.

9. $x^2 - 16x + 64 = 0$

14. $6x^2 - 2x - 1 = 0$

10. $x^2 = 3x$

15. $x^2 + 3x + 6 = 0$

11. $9x^2 - 24x + 16 = 0$

16. **STOPPING DISTANCE** The formula $d = 0.05s^2 + 1.1s$ estimates the minimum stopping distance d in feet for a car traveling s miles per hour. If a car stops in 200 feet, what is the fastest it could have been traveling when the driver applied the brakes?

12. $x^2 - 3x = 40$