# Lesson 11.6 Practice: The Discriminant and Choosing a Method

School Launch · Algebra I · Unit 11: Quadratic Functions and Equations · Worksheet A

No calculator

Name _____ Date _____ Score _____ / 10

Show your work under each problem, one step per line, and check your answer. Word problems: name the unknown, write the equation, solve, and answer in a sentence with units.

**1.** Find the discriminant of $4x^2 - 4x - 6 = 0$ and tell how many real solutions it has. EASY

**2.** Find the discriminant of $2x^2 + 2x - 7 = 0$ and tell how many real solutions it has. EASY

**3.** Find the discriminant of $x^2 - 2x + 1 = 0$ and tell how many real solutions it has. EASY

**4.** Find the discriminant of $-2x^2 - 4x + 4 = 0$ and tell how many real solutions it has. MEDIUM

**5.** Find the discriminant of $-x^2 - x - 9 = 0$ and tell how many real solutions it has. MEDIUM

**6.** Find the discriminant of $-3x^2 + 6x - 9 = 0$ and tell how many real solutions it has. MEDIUM

**7.** Find the discriminant of $x^2 - 7x - 5 = 0$ and tell how many real solutions it has. MEDIUM

**8.** Find the discriminant of $2x^2 + x - 4 = 0$ and tell how many real solutions it has. HARD

**9.** Find the discriminant of $-x^2 + 3x + 3 = 0$ and tell how many real solutions it has. HARD

**10.** Find the discriminant of $x^2 - 3x + 4 = 0$ and tell how many real solutions it has. HARD