

Quadratic Formula & Discriminant

Date _____ Period _____

Use the discriminant to determine the number of real solutions to each equation.

1) $-8x^2 - 3x + 9 = 9$

2) $-3x^2 + 7x + 1 = 9$

3) $-8n^2 + n - 5 = -9$

4) $3x^2 - 6x + 8 = 5$

5) $7r^2 + r + 10 = 3$

Find the value of the discriminant of each quadratic equation.

6) $3m^2 + 3m - 9 = -7$

7) $-x^2 + 2x + 1 = 5$

8) $-3k^2 - 6k - 12 = -5$

9) $-6p^2 + 10p - 16 = -6$

10) $-7m^2 + 1 = 5$

Solve each equation with the quadratic formula. ROUND TO NEAREST TENTH

11) $2a^2 + 12 = -10a$

12) $2r^2 - 26 = -9r$

13) $6n^2 + 3n = 108$

14) $a^2 - 1 = 0$

15) $5v^2 - 6v = 32$