

Solving Quadratics using the Quadratic Formula

Period _____ Group _____

Find the discriminant of each quadratic equation then state the number and type of solutions.

1) $-9a^2 - 5a - 10 = 0$

2) $3x^2 + 6x + 3 = 0$

3) $-2v^2 + 8v - 8 = 0$

4) $-10n^2 - 2n - 6 = 0$

Solve each equation. (no decimals)

5) $4x^2 + 4x - 99 = 0$

6) $x^2 + 7x - 60 = 0$

7) $a^2 + 3a - 4 = 0$

8) $4v^2 - 12v + 5 = 0$

9) $7x^2 + 4x - 1 = 0$

10) $a^2 - 10a - 1 = 0$

$$11) 11x^2 - 7x - 24 = 0$$

$$12) 4k^2 - 7k - 10 = 0$$

$$13) 5n^2 - 11n - 17 = -5$$

$$14) 5p^2 + 11p - 30 = 12$$

$$15) 6x^2 - 7x - 53 = 2$$

$$16) 5n^2 - 6n - 2 = 11$$

$$17) 4b^2 - b + 7 = 6$$

$$18) 5x^2 + 6x - 5 = -3$$

$$19) 8r^2 + 2r - 26 = -8$$

20) A ball is tossed upward with a starting velocity of 64 ft/s from a height of 6 ft. Use the motion formula $h = -16t^2 + vt + c$. What is the maximum height of the ball and after how many seconds will the ball hit the ground (round to the nearest hundredth using your calculator)?