

Q1 HW7 - All Work On Looseleaf

Date_____ Period_____

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

1) $6k^2 + 4k - 2 = 0$

2) $-a^2 + 2a + 1 = 2$

3) $4x^2 + 1 = 5x$

4) $n^2 + 3n = 4$

Solve each equation with the quadratic formula.

5) $2v^2 + 2v - 24 = 0$

6) $b^2 + 3b - 18 = 0$

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

8) $4x^2 + 4x + 5 = 4$

9) $3p^2 = -5p + 6$

10) $4k^2 = -2k + 5$

11) $2x^2 + 5x = 12$

12) $2m^2 - 2 = 3m$

13) $2n^2 - 5n = 7$

14) $4r^2 = -4 - 3r$

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

1) $6k^2 + 4k - 2 = 0$

64; two real solutions

2) $-a^2 + 2a + 1 = 2$

0; one real solution

3) $4x^2 + 1 = 5x$

9; two real solutions

4) $n^2 + 3n = 4$

25; two real solutions

Solve each equation with the quadratic formula.

5) $2v^2 + 2v - 24 = 0$

 $\{3, -4\}$

6) $b^2 + 3b - 18 = 0$

 $\{3, -6\}$

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

 $\{1\}$

8) $4x^2 + 4x + 5 = 4$

 $\left\{-\frac{1}{2}\right\}$

9) $3p^2 = -5p + 6$

 $\left\{\frac{-5 + \sqrt{97}}{6}, \frac{-5 - \sqrt{97}}{6}\right\}$

10) $4k^2 = -2k + 5$

 $\left\{\frac{-1 + \sqrt{21}}{4}, \frac{-1 - \sqrt{21}}{4}\right\}$

11) $2x^2 + 5x = 12$

 $\left\{\frac{3}{2}, -4\right\}$

12) $2m^2 - 2 = 3m$

 $\left\{2, -\frac{1}{2}\right\}$

13) $2n^2 - 5n = 7$

 $\left\{\frac{7}{2}, -1\right\}$

14) $4r^2 = -4 - 3r$

 $\left\{\frac{-3 + i\sqrt{55}}{8}, \frac{-3 - i\sqrt{55}}{8}\right\}$