Algebra 2 Name_____ ID: 1

11-21 Quiz Review

Date_____ Period____

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

1) $-4n^2 - 4n - 1 = 0$

2) $2x^2 - 11 = -9$

3) $-8v^2 + v + 2 = 4$

4) $-9n^2 = -7n - 2$

Solve each equation by factoring.

5) $(x - 8)(7x + 8) = 0$

6) $(3v + 1)(7v - 6) = 0$

7) $x^2 + 10x + 16 = 0$

8) $b^2 + 4b - 4 = -4$

Solve each equation with the quadratic formula.

9) $4p^2 - 3p - 33 = 12$

10) $x^2 - 7x = -8x + 56$

11) $12m^2 - 9 = 0$

12) $2k^2 + 5k + 17 = 5$

Solve each equation by completing the square.

13) $r^2 - 8r - 92 = 3$

14) $n^2 - 9n + 55 = -9$

15) $8n^2 + 16n - 24 = 0$

16) $3p^2 + 2p + 4 = -6$

Solve each equation by taking square roots.

17) $k^2 - 5 = -4$

18) $r^2 = 1$

19) $10r^2 - 5 = 875$

20) $6x^2 - 9 = 45$

21) $100r^2 + 3 = 39$

22) $6x^2 + 1 = 97$

Solve each equation by factoring.

23) $7k^2 - 70k + 147 = 0$

24) $6r^2 - 54r + 106 = -2$

25) $10v^2 + 15v - 179 = -4$

26) $12n^2 + 69n + 50 = 5$

Answers to 11-21 Quiz Review (ID: 1)

1) 0; one real solution
2) 16; two real solutions
3) −63; two imaginary solutions
4) 121; two real solutions
5) $\left\{8, -\frac{8}{7}\right\}$
6) $\left\{-\frac{1}{3}, \frac{6}{7}\right\}$
7) $\{-2, -8\}$
8) $\{-4, 0\}$
9) $\left\{\frac{15}{4}, -3\right\}$
10) $\{7, -8\}$
11) $\left\{\frac{\sqrt{3}}{2}, -\frac{\sqrt{3}}{2}\right\}$
12) $\left\{\frac{-5 + i\sqrt{71}}{4}, \frac{-5 - i\sqrt{71}}{4}\right\}$
13) $\{4 + \sqrt{111}, 4 - \sqrt{111}\}$
14) $\left\{\frac{9 + 5i\sqrt{7}}{2}, \frac{9 - 5i\sqrt{7}}{2}\right\}$
15) $\{1, -3\}$
16) $\left\{\frac{-1 + i\sqrt{29}}{3}, \frac{-1 - i\sqrt{29}}{3}\right\}$
17) $\{1, -1\}$
18) $\{1, -1\}$
19) $\{2\sqrt{22}, -2\sqrt{22}\}$
20) $\{3, -3\}$
21) $\left\{\frac{3}{5}, -\frac{3}{5}\right\}$
22) $\{4, -4\}$
23) $\{3, 7\}$
24) $\{6, 3\}$
25) $\left\{\frac{7}{2}, -5\right\}$
26) $\left\{-\frac{3}{4}, -5\right\}$