Geometry 1 - Mr. C. - All work on looseleaf. Name_____

Week 7 Practice - factorable quad. eq., discriminant, Date_____ Period____

© 2012 Kuta Software LLC. All rights reserved.

Solve each equation by factoring.

1) $b^2 + 4b = 5$

2) $0 = n - n^2 + 2$

3) $8x = -15 - x^2$

4) $-15 + 2x = -x^2$

5) $5 - 6p = -p^2$

6) $-8n = -15 - n^2$

7) $a^2 = 10 + 3a$

8) $-20 + x = -x^2$

9) $6k = -8 - k^2$

10) $-3m = -m^2 + 4$

11) $6r = -r^2 - 8$

12) $0 = -v^2 + 3v - 2$

13) $-12 + 5n = -2n^2$

14) $15x^2 + 19x = -6$

15) $4n = -3n^2 + 15$

16) $10m^2 + 13m = 3$

17) $0 = -21n - 4 - 5n^2$

18) $3a^2 = -2 + 7a$

19) $5 = -26k - 5k^2$

20) $2r^2 = -9 - 9r$

21) $15x^2 - x = 6$

22) $0 = 20v - 3v^2 - 25$

23) $0 = -4p^2 - 5 - 12p$

24) $5x^2 + 8x = -3$

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

25) $-6x^2 + 4x = -6$

26) $6n^2 - 4 = -5n$

27) $3x^2 - 3 = 6x$

28) $2x^2 + 2 = -4x$

29) $-x^2 - 4x = 4$

30) $n^2 - 6n = 3$

31) $k^2 = -2 - 2k$

32) $-3b^2 = 4b$

33) $3a^2 + 5 = 3a$

34) $-5r^2 + r = -6$

35) $-4n^2 - 1 = 4n$

36) $2b^2 = 1 + 5b$

37) $6p^2 - 6p = -2$

38) $6m^2 = 3m$

39) $6v^2 + v = 1$

40) $4x^2 = 6$

© 2012 Kuta Software LLC. All rights reserved. Made with Infinite Algebra 1.

Answers to Week 7 Practice - factorable quad. eq., discriminant, (ID: 2)

1) $\{1, -5\}$
2) $\{2, -1\}$
3) $\{-3, -5\}$
4) $\{3, -5\}$
5) $\{5, 1\}$
6) $\{5, 3\}$
7) $\{-2, 5\}$
8) $\{4, -5\}$
9) $\{-4, -2\}$
10) $\{4, -1\}$
11) $\{-2, -4\}$
12) $\{2, 1\}$
13) $\left\{\frac{3}{2}, -4\right\}$
14) $\left\{-\frac{3}{5}, -\frac{2}{3}\right\}$
15) $\left\{\frac{5}{3}, -3\right\}$
16) $\left\{-\frac{3}{2}, \frac{1}{5}\right\}$
17) $\left\{-\frac{1}{5}, -4\right\}$
18) $\left\{\frac{1}{3}, 2\right\}$
19) $\left\{-\frac{1}{5}, -5\right\}$
20) $\left\{-\frac{3}{2}, -3\right\}$
21) $\left\{\frac{2}{3}, -\frac{3}{5}\right\}$
22) $\left\{\frac{5}{3}, 5\right\}$
23) $\left\{-\frac{1}{2}, -\frac{5}{2}\right\}$
24) $\left\{-\frac{3}{5}, -1\right\}$
25) 160; two irrational solutions
26) 121; two rational solutions
27) 72; two irrational solutions
28) 0; one rational solution
29) 0; one rational solution
30) 48; two irrational solutions
31) −4; two imaginary solutions
32) 16; two rational solutions
33) −51; two imaginary solutions
34) 121; two rational solutions
35) 0; one rational solution
36) 33; two irrational solutions
37) −12; two imaginary solutions
38) 9; two rational solutions
39) 25; two rational solutions
40) 96; two irrational solutions

© 2012 Kuta Software LLC. All rights reserved. Made with Infinite Algebra 1.