Algebra 2 - Task 2.6 Name_____

Solving Quadratics - All Methods

Date_____ Period____

Solve using the Quadratic Formula - Level 2

1) $n^2 + 9n + 11 = 0$

2) $5p^2 - 125 = 0$

3) $m^2 + 5m + 6 = 0$

4) $2x^2 - 4x - 30 = 0$

Solve using the Quadratic Formula - Level 3

5) $b^2 - 12b + 10 = -10$

6) $6r^2 - 5r - 4 = 7$

7) $7x^2 - 16 = 6$

8) $6n^2 - 10n - 16 = 3$

Solve using the Quadratic Formula - Level 4

9) $4a^2 - 22 = -10a$

10) $n^2 - 45 = 12n$

11) $5v^2 - 2 - v = -v$

12) $4x^2 - 5x - 3 = 2x^2$

Solve by Factoring - Level 2

13) $p^2 + 6p + 5 = 0$

14) $k^2 - 8k = 0$

15) $x^2 - 7x = 0$

16) $a^2 + 5a = 0$

Solve by Factoring - Level 3

17) $6n^2 + 5n - 25 = 0$

18) $2x^2 - 11x - 21 = 0$

19) $10r^2 + 75r + 140 = 0$

20) $60m^2 + 4m - 160 = 0$

Solve by Factoring - Level 4

21) $4x^2 - 17x + 10 = -5$

22) $2n^2 + 13n + 19 = 4$

23) $5v^2 + 3 = -16v$

24) $20b^2 - 40b = 25$

Solve by completing the square - Level 2

25) $a^2 + 8a + 11 = 0$

26) $k^2 - 14k - 19 = 0$

27) $n^2 + 16n - 17 = 0$

28) $x^2 - 20x + 64 = 0$

Solve by completing the square - Level 3

29) $x^2 + 20x + 70 = 6$

30) $x^2 + 12x + 30 = -5$

31) $7n^2 - 14n - 73 = 9$

32) $9m^2 + 18m - 8 = 5$

Solve by completing the square - Level 4

33) $6x^2 - 48 = -12x$

34) $3p^2 = -12p - 9$

35) $5n^2 + 19n = 3n + 92 - 3n^2$

36) $2b^2 + 17b = 14 + 5b$

Algebra 2 - Task 2.6 Name_____

Solving Quadratics - All Methods

Date_____ Period____

Solve using the Quadratic Formula - Level 2

1) $n^2 + 9n + 11 = 0$ $\left\{\frac{-9+\sqrt{37}}{2}, \frac{-9-\sqrt{37}}{2}\right\}$

2) $5p^2 - 125 = 0$ $\{5, -5\}$

3) $m^2 + 5m + 6 = 0$ $\{-2, -3\}$

4) $2x^2 - 4x - 30 = 0$ $\{5, -3\}$

Solve using the Quadratic Formula - Level 3

5) $b^2 - 12b + 10 = -10$ $\{10, 2\}$

6) $6r^2 - 5r - 4 = 7$ $\left\{\frac{11}{6}, -1\right\}$

7) $7x^2 - 16 = 6$ $\left\{\frac{\sqrt{154}}{7}, -\frac{\sqrt{154}}{7}\right\}$

8) $6n^2 - 10n - 16 = 3$ $\left\{\frac{5+\sqrt{139}}{6}, \frac{5-\sqrt{139}}{6}\right\}$

Solve using the Quadratic Formula - Level 4

9) $4a^2 - 22 = -10a$ $\left\{\frac{-5+\sqrt{113}}{4}, \frac{-5-\sqrt{113}}{4}\right\}$

10) $n^2 - 45 = 12n$ $\{15, -3\}$

11) $5v^2 - 2 - v = -v$ $\left\{\frac{\sqrt{10}}{5}, -\frac{\sqrt{10}}{5}\right\}$

12) $4x^2 - 5x - 3 = 2x^2$ $\left\{3, -\frac{1}{2}\right\}$

Solve by Factoring - Level 2

13) $p^2 + 6p + 5 = 0$ $\{-5, -1\}$

14) $k^2 - 8k = 0$ $\{8, 0\}$

15) $x^2 - 7x = 0$ $\{7, 0\}$

16) $a^2 + 5a = 0$ $\{-5, 0\}$

Solve by Factoring - Level 3

17) $6n^2 + 5n - 25 = 0$ $\left\{-\frac{5}{2}, \frac{5}{3}\right\}$

18) $2x^2 - 11x - 21 = 0$ $\left\{-\frac{3}{2}, 7\right\}$

19) $10r^2 + 75r + 140 = 0$ $\left\{-\frac{7}{2}, -4\right\}$

20) $60m^2 + 4m - 160 = 0$ $\left\{\frac{8}{5}, -\frac{5}{3}\right\}$

Solve by Factoring - Level 4

21) $4x^2 - 17x + 10 = -5$ $\left\{\frac{5}{4}, 3\right\}$

22) $2n^2 + 13n + 19 = 4$ $\left\{-\frac{3}{2}, -5\right\}$

23) $5v^2 + 3 = -16v$ $\left\{-\frac{1}{5}, -3\right\}$

24) $20b^2 - 40b = 25$ $\left\{-\frac{1}{2}, \frac{5}{2}\right\}$

Solve by completing the square - Level 2

25) $a^2 + 8a + 11 = 0$ $\{-4+\sqrt{5}, -4-\sqrt{5}\}$

26) $k^2 - 14k - 19 = 0$ $\{7+2\sqrt{17}, 7-2\sqrt{17}\}$

27) $n^2 + 16n - 17 = 0$ $\{1, -17\}$

28) $x^2 - 20x + 64 = 0$ $\{16, 4\}$

Solve by completing the square - Level 3

29) $x^2 + 20x + 70 = 6$ $\{-4, -16\}$

30) $x^2 + 12x + 30 = -5$ $\{-5, -7\}$

31) $7n^2 - 14n - 73 = 9$ $\left\{\frac{7+\sqrt{623}}{7}, \frac{7-\sqrt{623}}{7}\right\}$

32) $9m^2 + 18m - 8 = 5$ $\left\{\frac{-3+\sqrt{22}}{3}, \frac{-3-\sqrt{22}}{3}\right\}$

Solve by completing the square - Level 4

33) $6x^2 - 48 = -12x$ $\{2, -4\}$

34) $3p^2 = -12p - 9$ $\{-1, -3\}$

35) $5n^2 + 19n = 3n + 92 - 3n^2$ $\left\{\frac{-2+5\sqrt{2}}{2}, \frac{-2-5\sqrt{2}}{2}\right\}$

36) $2b^2 + 17b = 14 + 5b$ $\{1, -7\}$