Algebra 2

Name_____ ID: 1

Assignment

Date_____ Period_____

Solve each equation with the quadratic formula.

1) $9x^2 - 9 = -2x$

2) $2x^2 = 13 - 4x$

3) $6a^2 - 5 = 7a$

4) $2b^2 = 50$

5) $4m^2 = 12m + 12$

6) $n^2 = 64$

7) $r^2 + 4r = 12$

8) $2m^2 - m = 45$

9) $7m^2 = 20$

10) $7x^2 = 4x + 1$

11) $10x^2 - 2 = 5x$

12) $4n^2 = 144$

13) $2x^2 = 15 + 10x$

14) $7a^2 + 6a = 6$

15) $4m^2 = -11m + 38$

16) $8n^2 - 8 = -11n$

17) $9p^2 - 2 = -5p$

18) $9x^2 - x = 2$

19) $3n^2 - 14 = -n$

20) $5p^2 = 2p + 15$

21) $m^2 + 4 = -12m$

22) $8a^2 + 5a = 5$

23) $2m^2 - 18 = 0$

24) $n^2 - 14 = 7n$

25) $a^2 - 21 = 0$

26) $12a^2 - 11 = 0$

27) $6a^2 - 6a = 12$

28) $5x^2 - 52 = 7x$

29) $3k^2 = 48$

30) $5x^2 = 11x + 19$

31) $k^2 - 85 = 12k$

32) $9v^2 = 18$

33) $5p^2 - 8p = 69$

34) $6p^2 - 6 = 0$

35) $3x^2 + 6x = 9$

36) $11n^2 = 11n + 15$

37) $6b^2 - 10b = -1$

38) $6x^2 - 90 = -12x$

39) $5r^2 - 16 = 7r$

40) $6r^2 = 2 + 11r$

41) $11n^2 = 16$

42) $x^2 = -7x + 5$

43) $6x^2 - 9x = -3$

44) $n^2 - 14 = -4n$

45) $3n^2 + 5n = 5$

46) $6v^2 - 11v = 121$

47) $9n^2 - 7n = 19$

48) $3b^2 - 10b = 57$

49) $x^2 = 11 + 2x$

50) $2b^2 + b = 28$

51) $6n^2 = 4 - 5n$

52) $n^2 - n = 90$

53) $3x^2 = 12$

54) $6m^2 + 6 = -12m$

55) $4m^2 - 36 = 0$

56) $4n^2 - 100 = 0$

57) $3m^2 - 11 = 8m$

58) $n^2 = -2n + 15$

59) $4r^2 + 3 = -8r$

60) $12x^2 = 9 + 2x$

Assignment   Date_____ Period____

Solve each equation with the quadratic formula.

1) $9x^2 - 9 = -2x$

$$\left\{ \frac{-1 + \sqrt{82}}{9}, \frac{-1 - \sqrt{82}}{9} \right\}$$

2) $2x^2 = 13 - 4x$

$$\left\{ \frac{-2 + \sqrt{30}}{2}, \frac{-2 - \sqrt{30}}{2} \right\}$$

3) $6a^2 - 5 = 7a$

$$\left\{ \frac{5}{3}, -\frac{1}{2} \right\}$$

4) $2b^2 = 50$

$$\{5, -5\}$$

5) $4m^2 = 12m + 12$

$$\left\{ \frac{3 + \sqrt{21}}{2}, \frac{3 - \sqrt{21}}{2} \right\}$$

6) $n^2 = 64$

$$\{8, -8\}$$

7) $r^2 + 4r = 12$

$$\{2, -6\}$$

8) $2m^2 - m = 45$

$$\left\{ 5, -\frac{9}{2} \right\}$$

9) $7m^2 = 20$

$$\left\{ \frac{2\sqrt{35}}{7}, -\frac{2\sqrt{35}}{7} \right\}$$

10) $7x^2 = 4x + 1$

$$\left\{ \frac{2 + \sqrt{11}}{7}, \frac{2 - \sqrt{11}}{7} \right\}$$

11) $10x^2 - 2 = 5x$

$$\left\{ \frac{5 + \sqrt{105}}{20}, \frac{5 - \sqrt{105}}{20} \right\}$$

12) $4n^2 = 144$

$$\{6, -6\}$$

13) $2x^2 = 15 + 10x$

$$\left\{ \frac{5 + \sqrt{55}}{2}, \frac{5 - \sqrt{55}}{2} \right\}$$

14) $7a^2 + 6a = 6$

$$\left\{ \frac{-3 + \sqrt{51}}{7}, \frac{-3 - \sqrt{51}}{7} \right\}$$

15) $4m^2 = -11m + 38$

$$\left\{ 2, -\frac{19}{4} \right\}$$

16) $8n^2 - 8 = -11n$

$$\left\{ \frac{-11 + \sqrt{377}}{16}, \frac{-11 - \sqrt{377}}{16} \right\}$$

17) $9p^2 - 2 = -5p$

$$\left\{ \frac{-5 + \sqrt{97}}{18}, \frac{-5 - \sqrt{97}}{18} \right\}$$

18) $9x^2 - x = 2$

$$\left\{ \frac{1 + \sqrt{73}}{18}, \frac{1 - \sqrt{73}}{18} \right\}$$

19) $3n^2 - 14 = -n$

$$\left\{ 2, -\frac{7}{3} \right\}$$

20) $5p^2 = 2p + 15$

$$\left\{ \frac{1 + 2\sqrt{19}}{5}, \frac{1 - 2\sqrt{19}}{5} \right\}$$

21) $m^2 + 4 = -12m$

$$\{-6 + 4\sqrt{2}, -6 - 4\sqrt{2}\}$$

22) $8a^2 + 5a = 5$

$$\left\{ \frac{-5 + \sqrt{185}}{16}, \frac{-5 - \sqrt{185}}{16} \right\}$$

23) $2m^2 - 18 = 0$

$$\{3, -3\}$$

24) $n^2 - 14 = 7n$

$$\left\{\frac{7 + \sqrt{105}}{2}, \frac{7 - \sqrt{105}}{2}\right\}$$

25) $a^2 - 21 = 0$

$$\{\sqrt{21}, -\sqrt{21}\}$$

26) $12a^2 - 11 = 0$

$$\left\{\frac{\sqrt{33}}{6}, -\frac{\sqrt{33}}{6}\right\}$$

27) $6a^2 - 6a = 12$

$$\{2, -1\}$$

28) $5x^2 - 52 = 7x$

$$\left\{4, -\frac{13}{5}\right\}$$

29) $3k^2 = 48$

$$\{4, -4\}$$

30) $5x^2 = 11x + 19$

$$\left\{\frac{11 + \sqrt{501}}{10}, \frac{11 - \sqrt{501}}{10}\right\}$$

31) $k^2 - 85 = 12k$

$$\{17, -5\}$$

32) $9v^2 = 18$

$$\{\sqrt{2}, -\sqrt{2}\}$$

33) $5p^2 - 8p = 69$

$$\left\{\frac{23}{5}, -3\right\}$$

34) $6p^2 - 6 = 0$

$$\{1, -1\}$$

35) $3x^2 + 6x = 9$

$$\{1, -3\}$$

36) $11n^2 = 11n + 15$

$$\left\{\frac{11 + \sqrt{781}}{22}, \frac{11 - \sqrt{781}}{22}\right\}$$

37) $6b^2 - 10b = -1$

$$\left\{\frac{5 + \sqrt{19}}{6}, \frac{5 - \sqrt{19}}{6}\right\}$$

38) $6x^2 - 90 = -12x$

$$\{3, -5\}$$

39) $5r^2 - 16 = 7r$

$$\left\{\frac{7 + 3\sqrt{41}}{10}, \frac{7 - 3\sqrt{41}}{10}\right\}$$

40) $6r^2 = 2 + 11r$

$$\left\{2, -\frac{1}{6}\right\}$$

41) $11n^2 = 16$

$$\left\{\frac{4\sqrt{11}}{11}, -\frac{4\sqrt{11}}{11}\right\}$$

42) $x^2 = -7x + 5$

$$\left\{\frac{-7 + \sqrt{69}}{2}, \frac{-7 - \sqrt{69}}{2}\right\}$$

43) $6x^2 - 9x = -3$

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

44) $n^2 - 14 = -4n$

$$\{-2 + 3\sqrt{2}, -2 - 3\sqrt{2}\}$$

45) $3n^2 + 5n = 5$

$$\left\{\frac{-5 + \sqrt{85}}{6}, \frac{-5 - \sqrt{85}}{6}\right\}$$

46) $6v^2 - 11v = 121$

$$\left\{\frac{11}{2}, -\frac{11}{3}\right\}$$

47) $9n^2 - 7n = 19$

$$\left\{\frac{7 + \sqrt{733}}{18}, \frac{7 - \sqrt{733}}{18}\right\}$$

48) $3b^2 - 10b = 57$

$$\left\{\frac{19}{3}, -3\right\}$$

49) $x^2 = 11 + 2x$

$$\left\{1 + 2\sqrt{3}, 1 - 2\sqrt{3}\right\}$$

50) $2b^2 + b = 28$

$$\left\{\frac{7}{2}, -4\right\}$$

51) $6n^2 = 4 - 5n$

$$\left\{\frac{1}{2}, -\frac{4}{3}\right\}$$

52) $n^2 - n = 90$

$$\left\{10, -9\right\}$$

53) $3x^2 = 12$

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

54) $6m^2 + 6 = -12m$

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

55) $4m^2 - 36 = 0$

$$\left\{3, -3\right\}$$

56) $4n^2 - 100 = 0$

$$\left\{5, -5\right\}$$

57) $3m^2 - 11 = 8m$

$$\left\{\frac{11}{3}, -1\right\}$$

58) $n^2 = -2n + 15$

$$\left\{3, -5\right\}$$

59) $4r^2 + 3 = -8r$

$$\left\{-\frac{1}{2}, -\frac{3}{2}\right\}$$

60) $12x^2 = 9 + 2x$

$$\left\{\frac{1 + \sqrt{109}}{12}, \frac{1 - \sqrt{109}}{12}\right\}$$