Review Topics WS #1

Name_____

Date_____ Period____

Solve each equation by taking square roots.

1) $100x^2 + 1 = 26$

2) $2 - 9x^2 = -34$

3) $100k^2 + 9 = 90$

4) $2p^2 - 2 = -10$

5) $81v^2 - 4 = 60$

6) $8 - 8k^2 = -157$

7) $-2 - 6b^2 = -78$

8) $5v^2 - 9 = 256$

Solve each equation by factoring.

9) $a^2 - 2a - 35 = 0$

10) $n^2 + 7n + 6 = 0$

11) $x^2 - 25 = 0$

12) $n^2 - 14n + 49 = 0$

13) $7a^2 - 22a + 3 = 0$

14) $5x^2 + 23x + 12 = 0$

15) $3a^2 - 13a - 10 = 0$

16) $5x^2 + 16x - 16 = 0$

17) $4x^2 + 3x + 1 = 2$

18) $7m^2 - 41m - 50 = 6$

19) $6x^2 - 7x - 14 = -4$

20) $3n^2 + 10n - 10 = -2$

Solve each equation by completing the square.

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

22) $r^2 + 12r - 21 = 9$

23) $p^2 - 14p + 44 = 4$

24) $v^2 - 20v - 15 = -8$

Solve each equation with the quadratic formula.

25) $6r^2 - 6 = 0$

26) $2k^2 + 9 = 0$

27) $a^2 = 7a - 12$

28) $7k^2 = 15$

29) $6x^2 + 5x = -10$

30) $4b^2 = 16$

31) $9x^2 = 7 - 6x$

32) $7p^2 = -11 + 6p$

33) $3x^2 = -7$

34) $10x^2 + 11 = 11x$

Simplify.

35) $\sqrt{50}$

36) $\sqrt{100}$

37) $\sqrt{75}$

38) $\sqrt{18}$

39) $\sqrt{72}$

40) $\sqrt{64}$

41) $\sqrt{150}$

42) $\sqrt{98}$

43) $\sqrt{252}$

44) $\sqrt{16}$

45) $\sqrt{147}$

46) $\sqrt{45}$

47) $\sqrt{128}$

48) $\sqrt{12}$

49) $\sqrt{8}$

50) $\sqrt{108}$

Review Topics WS #1

Name_____

Date_____ Period____

Solve each equation by taking square roots.

1) $100x^2 + 1 = 26$ $\left\{\frac{1}{2}, -\frac{1}{2}\right\}$

2) $2 - 9x^2 = -34$ $\{2, -2\}$

3) $100k^2 + 9 = 90$ $\left\{\frac{9}{10}, -\frac{9}{10}\right\}$

4) $2p^2 - 2 = -10$ $\{2i, -2i\}$

5) $81v^2 - 4 = 60$ $\left\{\frac{8}{9}, -\frac{8}{9}\right\}$

6) $8 - 8k^2 = -157$ $\left\{\frac{\sqrt{330}}{4}, -\frac{\sqrt{330}}{4}\right\}$

7) $-2 - 6b^2 = -78$ $\left\{\frac{\sqrt{114}}{3}, -\frac{\sqrt{114}}{3}\right\}$

8) $5v^2 - 9 = 256$ $\{\sqrt{53}, -\sqrt{53}\}$

Solve each equation by factoring.

9) $a^2 - 2a - 35 = 0$ $\{-5, 7\}$

10) $n^2 + 7n + 6 = 0$ $\{-6, -1\}$

11) $x^2 - 25 = 0$ $\{-5, 5\}$

12) $n^2 - 14n + 49 = 0$ $\{7\}$

13) $7a^2 - 22a + 3 = 0$ $\left\{\frac{1}{7}, 3\right\}$

14) $5x^2 + 23x + 12 = 0$ $\left\{-\frac{3}{5}, -4\right\}$

15) $3a^2 - 13a - 10 = 0$ $\left\{-\frac{2}{3}, 5\right\}$

16) $5x^2 + 16x - 16 = 0$ $\left\{\frac{4}{5}, -4\right\}$

17) $4x^2 + 3x + 1 = 2$ $\left\{\frac{1}{4}, -1\right\}$

18) $7m^2 - 41m - 50 = 6$ $\left\{-\frac{8}{7}, 7\right\}$

19) $6x^2 - 7x - 14 = -4$ $\left\{-\frac{5}{6}, 2\right\}$

20) $3n^2 + 10n - 10 = -2$ $\left\{\frac{2}{3}, -4\right\}$

Solve each equation by completing the square.

21) $n^2 - 16n = -8$ $\{8 + 2\sqrt{14}, 8 - 2\sqrt{14}\}$

22) $r^2 + 12r - 21 = 9$ $\{-6 + \sqrt{66}, -6 - \sqrt{66}\}$

23) $p^2 - 14p + 44 = 4$ $\{10, 4\}$

24) $v^2 - 20v - 15 = -8$ $\{10 + \sqrt{107}, 10 - \sqrt{107}\}$

Solve each equation with the quadratic formula.

25) $6r^2 - 6 = 0$

$\{1, -1\}$

26) $2k^2 + 9 = 0$

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

27) $a^2 = 7a - 12$

$\{4, 3\}$

28) $7k^2 = 15$

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

29) $6x^2 + 5x = -10$

$\left\{\frac{-5 + i\sqrt{215}}{12}, \frac{-5 - i\sqrt{215}}{12}\right\}$

30) $4b^2 = 16$

$\{2, -2\}$

31) $9x^2 = 7 - 6x$

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

32) $7p^2 = -11 + 6p$

$\left\{\frac{3 + 2i\sqrt{17}}{7}, \frac{3 - 2i\sqrt{17}}{7}\right\}$

33) $3x^2 = -7$

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

34) $10x^2 + 11 = 11x$

$\left\{\frac{11 + i\sqrt{319}}{20}, \frac{11 - i\sqrt{319}}{20}\right\}$

Simplify.

35) $\sqrt{50}$

$5\sqrt{2}$

36) $\sqrt{100}$

10

37) $\sqrt{75}$

$5\sqrt{3}$

38) $\sqrt{18}$

$3\sqrt{2}$

39) $\sqrt{72}$

$6\sqrt{2}$

40) $\sqrt{64}$

8

41) $\sqrt{150}$

$5\sqrt{6}$

42) $\sqrt{98}$

$7\sqrt{2}$

43) $\sqrt{252}$

$6\sqrt{7}$

44) $\sqrt{16}$

4

45) $\sqrt{147}$

$7\sqrt{3}$

46) $\sqrt{45}$

$3\sqrt{5}$

47) $\sqrt{128}$

$8\sqrt{2}$

48) $\sqrt{12}$

$2\sqrt{3}$

49) $\sqrt{8}$

$2\sqrt{2}$

50) $\sqrt{108}$

$6\sqrt{3}$