

Review Topics WS #2

Name _____

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Date _____ Period _____

Solve each equation by taking square roots.

1) $5 - 2x^2 = -33$

2) $10 - 3r^2 = -203$

3) $8b^2 + 8 = 656$

4) $5a^2 + 4 = -91$

5) $7r^2 - 3 = 109$

6) $9v^2 - 1 = 728$

7) $6n^2 - 5 = 517$

8) $5a^2 - 7 = 173$

Solve each equation by factoring.

9) $x^2 - 11x + 28 = 0$

10) $k^2 + 6k + 5 = 0$

11) $m^2 + 3m - 4 = 0$

12) $b^2 + 3b - 18 = 0$

13) $5k^2 - 2k = 0$

14) $3b^2 - b - 10 = 0$

15) $3x^2 - 16x + 5 = 0$

16) $5k^2 + 3k - 2 = 0$

17) $3x^2 + 2x - 2 = -2$

18) $3b^2 - 25b = -8$

19) $2n^2 - 5n - 9 = -2$

20) $5n^2 + 3n + 2 = 2$

Solve each equation by completing the square.

21) $r^2 - 6r - 67 = 5$

22) $k^2 + 10k - 47 = 9$

23) $n^2 + 12n - 15 = -2$

24) $n^2 + 10n - 85 = -10$

Solve each equation with the quadratic formula.

25) $2a^2 - 104 = 3a$

26) $3k^2 = 5k - 3$

27) $6m^2 = 2 + 5m$

28) $10n^2 - 1 = 2n$

29) $2r^2 = -5r - 2$

30) $2b^2 + 6 = 7b$

31) $b^2 - 16 = 0$

32) $4x^2 - 13 = 5x$

33) $r^2 = 121$

34) $3a^2 - 132 = 4a$

Simplify.

35) $\sqrt{24}$

36) $\sqrt{112}$

37) $\sqrt{28}$

38) $\sqrt{125}$

39) $\sqrt{147}$

40) $\sqrt{216}$

41) $\sqrt{392}$

42) $\sqrt{20}$

43) $\sqrt{98}$

44) $\sqrt{108}$

45) $\sqrt{8}$

46) $\sqrt{448}$

47) $\sqrt{288}$

48) $\sqrt{72}$

49) $\sqrt{27}$

50) $\sqrt{100}$

Solve each equation by taking square roots.

1) $5 - 2x^2 = -33$

$\{\sqrt{19}, -\sqrt{19}\}$

3) $8b^2 + 8 = 656$

$\{9, -9\}$

5) $7r^2 - 3 = 109$

$\{4, -4\}$

7) $6n^2 - 5 = 517$

$\{\sqrt{87}, -\sqrt{87}\}$

2) $10 - 3r^2 = -203$

$\{\sqrt{71}, -\sqrt{71}\}$

4) $5a^2 + 4 = -91$

$\{i\sqrt{19}, -i\sqrt{19}\}$

6) $9v^2 - 1 = 728$

$\{9, -9\}$

8) $5a^2 - 7 = 173$

$\{6, -6\}$

Solve each equation by factoring.

9) $x^2 - 11x + 28 = 0$

$\{7, 4\}$

11) $m^2 + 3m - 4 = 0$

$\{-4, 1\}$

13) $5k^2 - 2k = 0$

$\left\{\frac{2}{5}, 0\right\}$

15) $3x^2 - 16x + 5 = 0$

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

17) $3x^2 + 2x - 2 = -2$

$\left\{-\frac{2}{3}, 0\right\}$

19) $2n^2 - 5n - 9 = -2$

$\left\{\frac{7}{2}, -1\right\}$

10) $k^2 + 6k + 5 = 0$

$\{-1, -5\}$

12) $b^2 + 3b - 18 = 0$

$\{3, -6\}$

14) $3b^2 - b - 10 = 0$

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

16) $5k^2 + 3k - 2 = 0$

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

18) $3b^2 - 25b = -8$

$\left\{\frac{1}{3}, 8\right\}$

20) $5n^2 + 3n + 2 = 2$

$\left\{-\frac{3}{5}, 0\right\}$

Solve each equation by completing the square.

21) $r^2 - 6r - 67 = 5$

$\{12, -6\}$

23) $n^2 + 12n - 15 = -2$

$\{1, -13\}$

22) $k^2 + 10k - 47 = 9$

$\{4, -14\}$

24) $n^2 + 10n - 85 = -10$

$\{5, -15\}$

Solve each equation with the quadratic formula.

25) $2a^2 - 104 = 3a$

$$\left\{ 8, -\frac{13}{2} \right\}$$

27) $6m^2 = 2 + 5m$

$$\left\{ \frac{5 + \sqrt{73}}{12}, \frac{5 - \sqrt{73}}{12} \right\}$$

29) $2r^2 = -5r - 2$

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

31) $b^2 - 16 = 0$

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

33) $r^2 = 121$

$$\{11, -11\}$$

26) $3k^2 = 5k - 3$

$$\left\{ \frac{5 + i\sqrt{11}}{6}, \frac{5 - i\sqrt{11}}{6} \right\}$$

28) $10n^2 - 1 = 2n$

$$\left\{ \frac{1 + \sqrt{11}}{10}, \frac{1 - \sqrt{11}}{10} \right\}$$

30) $2b^2 + 6 = 7b$

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

32) $4x^2 - 13 = 5x$

$$\left\{ \frac{5 + \sqrt{233}}{8}, \frac{5 - \sqrt{233}}{8} \right\}$$

34) $3a^2 - 132 = 4a$

$$\left\{ \frac{22}{3}, -6 \right\}$$

Simplify.

35) $\sqrt{24}$

$$2\sqrt{6}$$

37) $\sqrt{28}$

$$2\sqrt{7}$$

39) $\sqrt{147}$

$$7\sqrt{3}$$

41) $\sqrt{392}$

$$14\sqrt{2}$$

43) $\sqrt{98}$

$$7\sqrt{2}$$

45) $\sqrt{8}$

$$2\sqrt{2}$$

47) $\sqrt{288}$

$$12\sqrt{2}$$

49) $\sqrt{27}$

$$3\sqrt{3}$$

36) $\sqrt{112}$

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38) $\sqrt{125}$

$$5\sqrt{5}$$

40) $\sqrt{216}$

$$6\sqrt{6}$$

42) $\sqrt{20}$

$$2\sqrt{5}$$

44) $\sqrt{108}$

$$6\sqrt{3}$$

46) $\sqrt{448}$

$$8\sqrt{7}$$

48) $\sqrt{72}$

$$6\sqrt{2}$$

50) $\sqrt{100}$

$$10$$