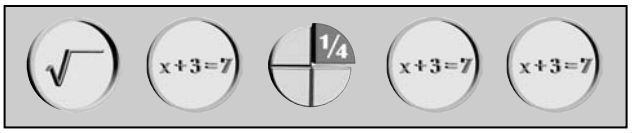
SECTION QUIZ 2-3



Remember:
Score an 85% or higher on all three quizzes and you may be exempt from the chapter test!



Congratulations! You have completed this section!
Answer the following questions to test your understanding of the material. When you are finished, hand in your quiz to your teacher. Each answer is worth 1.9 points.

1. A(n) _____ expression is a mathematical expression containing a radical.
(a) algebraic (b) mathematical (c) radical

2. The radical symbol, $\sqrt{\ }$, means to calculate the _____ (two, three, four) equal factors of the number under the radical sign.

3. The symbol, $\sqrt[4]{\ }$, means to find the _____ (two, three, four) equal factors of the number under the radical symbol.

4. The small raised number in front of the radical sign is called the _____ (base, root, index).

5. A principal square root is the _____ (positive, negative, neutral) root in a square root problem.

Find the roots.

6. $\sqrt{81}$ = _____

7. $\sqrt[3]{-27}$ = _____

Write the index for each of the following radical expressions.

8. $\sqrt{2}$ index = _____

9. $\sqrt[4]{1}$ index = _____

10. $\sqrt[5]{23}$ index = _____

Determine the principal square root for each of the following radical expressions.

11. $\sqrt{1}$ _____

12. $\sqrt{36}$ _____

13. $\sqrt{49}$ _____

14. $\sqrt{169}$ _____

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Choose or determine the correct answer.

15. Algebraic expressions contain constants and variables. _____
(a) True or (b) False

16. Formulas are a type of algebraic expression because they contain variables. _____
(a) True or (b) False

17. The grouping of like objects in a mathematical expression is known as combining _____ terms.

18. A(n) _____ (constant, variable, unknown) is a number or letter whose value does not change.

19. A _____ (constant, variable, coefficient) is a letter used to represent a number.

20. A number, variable or a product of more than one number or variable not separated by addition or subtraction symbols is called a(n) _____ (variable, unknown, term).

Show your work and write your answers on the blanks.

21. Calculate the area of a rectangle with a length of 7 meters and a width of 3 meters.
_____

22. Calculate the volume of a rectangular prism with dimensions of 4 inches by 4 inches by 1 inch. _____
(a) 9 cubic inches (c) 16 sq inches (e) none of these
(b) 17 cubic inches (d) 9 sq inches

Determine the coefficient of the following terms.

23. $13x$ coefficient _____

24. $200x$ coefficient _____

25. y coefficient _____

26. The terms $4x$, $54x$, $4y$ are _____ (like, unlike) terms.

Simplify the following mathematical expressions. Show your work and place your answer on the blank (27-30).

27. $5x + 14 + 10x + 25$ _____

28. $8 + 6x + 5x + 7$ _____

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29. $3xy + 6xyz + 8xy + 10 + 6xyz$ _____

30. $5x + 2x^2 + 4x^3 + 2x^2 + 9x + 5x^3$ _____

31. Choose the example of the Distributive Property. _____

(a) $x = x$ (c) $3(x + 4) = (3 \bullet x) + (3 \bullet 4)$

(b) $5x + 8$ (d) $x + y = y + x$

Perform the indicated operations. Reduce your answers. Show your work and write your answers on the blanks.

32. $\frac{1}{3} \bullet \frac{1}{4} =$ _____

33. $\frac{2}{7} + \frac{4}{7} =$ _____

34. $\frac{x}{4} \bullet \frac{y}{4} =$ _____

35. $\frac{2x}{4} + \frac{4y}{4} =$ _____

(a) $\frac{8xy}{16}$ (b) $\frac{6xy}{8}$ (c) $\frac{2x+4y}{4}$ (d) $\frac{6xy}{4}$

36. $\frac{8}{z} - \frac{5}{z} =$ _____

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37. $\frac{a}{b} \div \frac{d}{c} =$ _____

(a) $\frac{ac}{bd}$ (b) $\frac{a+c}{b+d}$ (c) $\frac{da}{cb}$ (d) $\frac{a-d}{b-c}$

38. $\frac{2x+3y}{5} + \frac{2x+3y}{5} =$ _____

39. $\frac{5x+4y}{y} - \frac{x+3y}{y} =$ _____

Simplify the following expressions. Show your work. Write the answer on the blank.

40. $2[2 + 4(4 - 2)] + 4 =$ _____

41. $9^2 + [2^2 - 3(4 - 1)] + 5 =$ _____

Simplify the following algebraic expressions. Show your work. Write the answer on the blank.

42. $3x + 2\{2(x - 3)\} + 6 =$ _____

43. $3x^2 + 2\{2[3(x + 2)] + 2x^2\} + 3 =$ _____

44. $2x^2 + 2\{3[3(x + 3)] + 3x^2\} - 3 =$ _____

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45. $\dfrac{2[3+3(2-1)]}{2[3(3-2)]} =$ _____

46. $\dfrac{3[x+2(x-2)}{4(x+1)} =$ _____

(a) $\dfrac{3x}{5x}$ (b) $^3/_5$ (c) $^3/_4$ (d) $5x$ - 3 (e) $\dfrac{9x-12}{4x+4}$ (f) none of these

47. $\dfrac{3\{1+2[x+3(x-2)]\}}{4(x+2)} =$ _____

Match the Life Principles.

48. _____ *"Changes come from* (a) *has a solution."*

49. _____ *"Problems in life are simplified* (b) *we must all work together."*

50. _____ *"Freedom requires* (c) *when taken one step at a time."*

51. _____ *"Every problem* (d) *radical thoughts."*

52. _____ *"To maintain freedom,* (e) *diligent effort."*

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