Name: _____

Date: _____ Grade: _____

Basic Math Skills

CHAPTER 5 TEST

Congratulations on completing this chapter! ***Answer the following questions to test your understanding of the material. When you finish, hand in your test to your teacher for a final grade. Each answer is worth 1.9 points.***

Work the following problems. Show your work in the space provided and write your answers on the blanks.

1. 96.52 cm × $^{1}/_{2}$ = _____

2. 24.8 metric tons × $^{3}/_{4}$ = _____ metric tons

3. On their camping trip, in two hours Roberto hiked three-fifths as far as Rafael. If Rafael hiked 2,500 meters, calculate the distance that Roberto hiked. _____

4. A Red Cross truck had a capacity of 16 metric tons. The truck was loaded to $^{7}/_{8}$ capacity hauling supplies to the World Trade Center disaster. Calculate the weight of the supplies on the truck. _____

5. Which of the following represent the Metric conversion from meters to seven feet?

_____

(a) 1.6096 (b) 2.9192 (c) 2.1336 (d) .9144

6. 7 in. = _____ cm

7. 25 kilometers is how many miles? _____

(a) 12.42 miles (b) 28.3 miles (c) 10.08 miles (d) 15.525 miles

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8. 9 yards = _____ meters

9. A box has a capacity of 3 cubic feet. What is the capacity of the box in liters? _____
(a) 156.63 liters (b) 114.95 liters (c) 99.4 liters (d) 84.95 liters

10. A very large cooking pot can hold 4000 ml. What is the volume of the cooking pot in gallons? _____
(a) 15.2 gallons (b) 1.06 gallons (c) 10.56 gallons (d) .792 gallons

11. A vial of medicine holds 2 cubic inches of medicine. Calculate the volume of the vial in cubic centimeters. _____ cc

12. 20 liters = _____ qts

13. 2 gallons = _____ liters

14. 2.2 pounds = _____ g

15. 20 kg = ____ pounds

16. 10 g = _____ oz

17. A Red Cross truck carried 20 tons of relief supplies to New York City after 9-11-2001. What was the weight of the supplies in kilograms? _____
(a) 907.2 kg (b) 2,000 kg (c) 22,680 kg (d) 18,144 kg

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Write "C" for composite, or "P" for prime beside numbers 18-21.

18. _____ 39 **19.** _____ 12 **20.** _____ 19 **21.** _____ 26

22. What are the prime factors of 49? _____

23. Find the prime factors of 48. _____

24. Which of the following list of numbers is bimodal? _____

(a) 3, 5, 3, 5 (b) 1, 2, 3, 4, 5 (c) 9, 7, 5, 3, 1 (d) 3, 4, 6, 2

25. To find the median of a list of numbers the numbers must first be arranged in _____ numerical order.

Find the mean, mode, median and range of the following lists of numbers (26-27).

26. {5, 16, 25, 4, 5}

mean _____
mode _____
median _____
range _____

27. {6, 4, 2, 3, 6, 5, 7, 11}

mean _____
mode _____
median _____
range _____

28. Powers of _____ are used in scientific notation.

29. 10^{-2} = _____

30. 10^{6} = _____

31. Which number below is in proper scientific notation? _____

(a) 2.98×10^{12} (b) 456 (c) 38.93×10^{4} (d) $599{,}999.9 \times 10^{2}$

Convert the following numbers to scientific notation.

32. 98,765.43 = _____

33. 35.21 = _____

34. The distance of the Earth from the Moon is approximately 252,710 miles. Convert this distance into scientific notation. _____

Perform the indicated operation. Be sure to write answers in proper scientific notation form.

35. $(45.4 \times 10^{5}) + (4.4 \times 10^{3})$ = _____

36. $(12.5 \times 10^{2}) - (12.5 \times 10^{2})$ = _____

37. $(3.2 \times 10^{5})(3.0 \times 10^{4})$ = _____

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Choose the answer that is the proper representation of the answer to the following problems for #38-39.

38. $(3.6 \times 10^5) \div (1.2 \times 10^{-3})$ _____

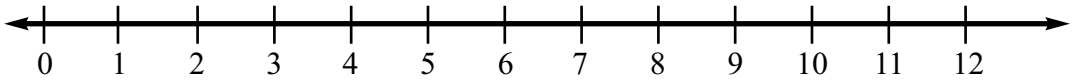
(a) 4 (b) 4×10^8 (c) 300,000,000 (d) 3×10^8

39. $(8.48 \times 10^{-8}) \div (8 \times 10^{-11})$ _____

(a) $1{,}060 \times 10^3$ (b) 1.06×10^3 (c) 1.1×10^{-18} (d) $.11 \times 10^{-2}$

40. The value of $\sqrt{11}$ must be between the value of $\sqrt{9}$ and the value of $\sqrt{_____}$.

41. Estimate the value of $\sqrt{50}$ and show the value on the number line. _____



Work the following problems in the space provided for #42-43. Write your answers on the blanks provided.

42. Professor K believes that a good estimate for $\sqrt{37}$ is one of the following responses. Choose the best estimate. _____

(a) 9 (b) 10 (c) 9.5 (d) none of these

43. Professor K left for his vacation last week. The first day he drove 75 miles to the airport. Professor K then flew 1,325 miles. The second day Professor K rented a car and drove 115 miles. The third day Professor K retraced his path and returned home. Estimate how many miles Professor K traveled on his vacation. _____

(a) 2,000 (b) 2,500 (c) 3,000 (d) 3,500

44. The simple interest formula is _____.

Calculate the interest in the following problems using the simple interest formula. Show your work and write your answers on the blanks.

45. I = _____: P = \$18,000.00; r = 3%; t = 6 months.

46. Professor K wanted to remodel his house. The contractor gave Professor K a cost estimate of \$15,000.00 for the remodeling job. Calculate the amount of interest Professor K would owe at the end of 6 months at a 7% rate of interest.

I = _____

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Match the following (47-48), then work problem 49.

47. $F =$ _____ (a) $\frac{9}{5}C + 32$

48. $C =$ _____ (b) $\frac{5}{9}(F - 32)$

49. Convert °*F* to °*C*. Show your work. If the average surface temperature of the Moon is estimated to be -22°*F*, convert the estimated temperature of the surface of the Moon during the daytime into degrees Celsius. _____

Choose the best meaning for each Life Principle.

50. *"Weigh all your options before proceeding."*

(a) Options tend to be overweight or underweight; therefore, it is a good idea to weigh them.
(b) The options for proceeding have a great deal to do with weight.
(c) When trying to decide on a course of action, strictly evaluate all possible factors.

51. *"The greatest person is not found in the middle of the crowd. He stands apart."*

(a) To be great, a person must be a loner.
(b) A person who achieves greatness does not follow the crowd. His lifestyle is above mediocrity.
(c) Great people feel they are too important to associate with normal citizens.

52. *"When life gives you a handful of lemons, turn them into a lemonade."*

(a) Make the best of the not-so-sweet things in life.
(b) Some people are called on to make a lot of lemonade.
(c) We have to take the bitter with the sweet in life.

53. *"A friend in need is a friend indeed."*

(a) Helping a person in need is a good way to make friends.
(b) Indeed, a needy friend needs a friend.
(c) One who befriends another in time of that person's need is a true friend.

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