Name: _____

Date: _____ Grade: _____

Basic Math Skills

CHAPTER 6 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 1.75 points.***

Use your calculator to work the problems below. Place the answer on the blank provided.

1. 2,248 - 325 - 699 - 527 + 3200 = _____

2. 800 - 500 + 4 • 35 = _____

3. 986 ÷ 2 • 5 ÷ 4 + 3 = _____

4. 54^2 = _____

5. 16^3 = _____

6. 80^4 = _____

7. $\sqrt[5]{32768}$ = _____

8. $\sqrt[10]{1024}$ = _____

9. 57^3 = _____

Use your calculator to work the following percentage problems.

10. Jo Ann's brother, Jim, invested $7,500.00 for 20 years in a mutual fund with a 10.95% rate of interest. At the end of the ten years Jim had a total of $_____.

11. Roland took the money he borrowed and started a small business. In the first year he made a profit of $15,000.00. Roland had to pay income tax on this money at a rate of 17%. Roland calculated his income tax to be $_____.

12. A discount on a new car selling for $18,000.00 was listed in the newspaper to be 35%. Karla wanted to purchase the car. Karla would have to pay $_____ for the car.

Matching

13. _____ Volume of a rectangular prism	(a) $P = 2w + 2l$
14. _____ Circumference of a circle	(b) $A = w \times l$
15. _____ Perimeter of a rectangle	(c) $V = w \times l \times h$
16. _____ Area of a circle	(d) $C = \pi d = 2\pi r$
17. _____ Area of a rectangle	(e) $A = \pi r^2$

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Use your calculator to work the following area and volume problems. Write your answer on the blank provided.

18. Calculate the area of a triangle with a base of 7 inches and a height of 8.8 inches.

_____

19. The diameter of the Moon is approximately 2,160 miles (use the formula $A_s = 4\pi r^2$). The surface area is _____. (Write exactly what is shown on the LCD screen for the answer.)

Perform the following calculations using your calculator. Write answers in scientific notation (20-25).

20. $(4.321 \times 10^4) + (5.7 \times 10^5) - (5.888 \times 10^4) =$ _____

21. $(2.2 \times 10^{11}) + (2.111 \times 10^{13}) =$ _____

22. $\dfrac{(4.6\times10^7)(3.75\times10^4)}{4.6\times10^7} =$ _____

23. $\dfrac{(3.5\times10^4)(6.75\times10^{-24})}{2.7\times10^6} =$ _____

24. The output of energy from the Sun is approximately 8.947×10^8 calories per minute for each square meter. The number of calories generated by the Sun in one hour from one square meter is _____ calories. Be sure to express your answer in scientific notation form.

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25. The distance of Mars from Earth is approximately 35×10^6 miles. A spacecraft launched toward Mars by NASA from Florida travels at a rate of 18,000 miles per hour. It will take the spacecraft _____ hours to reach Mars. (Use the distance formula, $d = rt \rightarrow t = {}^{d}/_{r}$.)

26. The first Olympic Torch Relay was held during the 1936 Berlin Games. When the flame "traveled" from Olympia, Greece to Berlin, Germany lasted the journey 12 days and covered 1,910 miles across seven countries. Calculate the average number of miles covered each day if the flame had been carried in 11 days. Round your answer to the nearest *hundredth*. _____

Calculate the mean, mode, median and range in the following data set. Write your answers on the blanks provided. {11, 29, 15, 20, 40, 201, 13, 22}

27. mean _____ **28.** median _____ **29.** mode _____ **30.** range _____

Refer to Table 1 to make the following conversions with the aid of your calculator. Use the space provided to set up the conversions properly.

Table 1

Length

one inch (in.)	=	2.54 centimeters (cm)
one mile (mi)	=	1.609344 kilometers (km)
one yard (yd)	=	0.9144 meter (m)
one meter (m)	=	39.3708 inches (in.)

31. 7 meter = _____ inches

32. 90 yards = _____ meters

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33. 6 in = _____ cm

34. 254 cm = _____ ft

35. A runner at a track meet ran the mile in 4.3 minutes. Calculate how many kilometers per hour the runner ran the mile. _____

Refer to Table 2 to make the following conversions with the aid of your calculator. Use the space provided to set up the conversions properly.

Table 2

Area

square centimeter	=	0.155000 sq in.
square meter	=	10.763910 sq ft
square inch	=	645.16 sq mm
square foot	=	0.09290304 sq meter
square yard	=	0.836127 sq meter
one sq ft	=	144 sq in.

36. 3 sq foot = _____ sq in.

37. 2.55000 sq in. = _____ sq cm

38. A sheet of copy paper is 11 inches long and 8.5 inches wide. The area in inches of a sheet of copy paper is _____ sq in.

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Refer to Table 3 to make the following conversions with the aid of your calculator. Set up the problems in the space provided and write your answers on the blanks.

Table 3

Volume

English System		**Metric System**
0.061024 cubic in.	=	Cubic centimeter
35.314667 cubic ft	=	Cubic meter (m^3)
Cubic inch	=	16.387064 cubic centimeters
Cubic foot;	=	0.028317 cubic meters;
7.480520 gal		28.31605 liters (*l*)
one ***gill***	=	23.656 milliliters (ml)
(4 gills = one pint)		

39. A tanker trailer on a gasoline truck holds approximately 5,000 gallons of gasoline. Calculate the volume of gasoline in the tank trailer in liters, if the tank is three-fourths full. Round your answer to the nearest liter. _____

40. The dimensions of a box used for shipping office supplies are 12 inches wide, 8 inches high, and 12 inches long. The volume of the box in cubic millimeters is _____ cubic millimeters.

Work the following conversion problems. Refer to Table 4 and set up the problems in the space provided. Use your calculator to perform the calculations, then write your answers on the blanks.

Table 4

Weight

one gill	=	4 ounces
one ounce (oz)	=	28.349523 grams (g)
one kilogram (kg)	=	2.204623 pounds
one pound	=	0.453592 kg or
		453.59237 grams (g)
one ton	=	907.18474 kg

41. A milk tanker truck can haul approximately 23,000 kg of milk. If the milk truck is one-half full the truck is hauling _____ pounds of milk.

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42. A soft drink can holds 12 fluid ounces of liquid. The nutritional facts list shows that one can contains 35 grams of carbohydrates. Calculate the amount of carbohydrates in a six-pack of soft drinks. Convert the answer into pounds.
grams: _____ pounds: _____

Choose the correct answer or fill in the blank.

43. The formula for converting Fahrenheit temperatures into degree Celsius is C = _____.
(a) $\frac{5}{9}(F - 32)$ (b) $\frac{9}{5}C + 32$ (c) neither of these

44. The formula for converting degrees Celsius into degrees Fahrenheit is F = _____.
(a) $\frac{5}{9}(F - 32)$ (b) $\frac{9}{5}C + 32$ (c) neither of these

45. The formula for converting degrees Celsius into degrees Kelvin is K = _____.
(a) $273.16 + C$ (b) $K - 273.16$ (c) $\frac{5}{9}C + 32$

46. The surface temperature of Jupiter is estimated to be -200°F at the lowest point. Convert the surface temperature of Jupiter at the lowest point into degrees Celsius. _____°C.

Work the following temperature conversion problems with the aid of your calculator. Show your work for setting up the conversions.

47. 50°C = _____°F

48. 135°C = _____°K

49. 70°K = _____°C

Solve for x in the following problems. Show your work and write your answer on the blank. Be sure to use your calculator for the calculations.

50. $4x + 14 = 3x + 21$; x = _____

51. $40.5x - 9 = 13.5x + 18$; x = _____

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52. Seven times a number decreased by two is the same as three times the number increased by six. What is the number? $x =$ _____

53. Nine times a number increased by one is the same as eight times the number decreased by five. What is the number? $x =$ _____

Write the letter of the statement that best explains the meaning of each Life Principle.

54. *"Commitment separates the doers from the dreamers."*
(a) A doer never sleeps.
(b) Those who work hard toward a goal accomplish more than those who just talk about it.
(c) Being awake is better than sleeping

55. *"The man who removes a mountain begins by carrying away small stones."*
(a) Large projects consist of many small ones joined together.
(b) A mountain is made of little rocks.
(c) Take care of the pennies and the dollars will take care of themselves.

56. *"Life consists of many absolutes. Truth is one of them."*
(a) Truth is one of many absolutes in life.
(b) Life truly consists of many absolutes.
(c) Truth is absolutely consistent in most people's lives.

57. *"How much you get out of life, depends on how much you put into life."*
(a) Spend a lot of money so you'll be happy
(b) If you work hard, you'll get rich
(c) To insure a good harvest, plant a lot of seeds.

58. *"Beginning is easy, continuing is hard."*
(a) Some things are easy and some are hard.
(b) It's easy to start something, but many will quit when it becomes difficult.
(c) Completing a goal is easier than starting it.

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