

## Math Facts Vocabulary

These are the vocabulary facts that you will learn in math class this year. Study them at your own pace but be aware that you will have a quiz on them almost every week. The quiz will have 10 questions chosen at random. You will keep a graph of your number correct every week. We will also keep a graph for the class. **This is the only set you will receive!**

### Math Language

1. **Sum** - the answer to an addition problem.
2. **Addend** - each number that is being added.
3. **Factor** - a number that is multiplied by another number to find a product.
4. **Product** - the answer to a multiplication problem.
5. **Quotient** - the answer to a division problem.
6. **Difference** - the answer to a subtraction problem.
7. **Dividend**-the number being divided
8. **Divisor**- the number dividing into the dividend
9. **Divisibility** - ability of one number to divide into another with no remainder.
10. **Factor tree** - used to find a number's prime factors.
11. **Order of Operations** - **PEMDAS** - parentheses, exponents, multiply and divide from left to right, and add and subtract from left to right.
12. **Integers** - includes all whole numbers and their opposites.
13. **Positive integers** are integers greater than zero, and **negative integers** are integers less than zero.
14. **Absolute value** - the value of an integer's distance from zero.
15. **Additive Inverse**-the opposite of a given number
16. **percent**-the ratio of a number to 100; percent means "per hundred"

### Statistics and Probability

17. **Range** is the difference between the lowest value and highest value in a set of data.
18. **Bar Graphs** compare amounts.
19. **Line Graphs** show change over time.
20. To find the **mean**, add all numbers, then divide sum by the number of items in the set.
21. **Median** is the middle number in a set of ordered numbers.
22. The value that occurs most often in a data set is the **mode**.
23. **Probability**-a comparison of the number of favorable outcomes to the number of possible outcomes
24. **Outcome**-a possible result from a probability experiment
25. **Random sample**-a sample in which each subject in the overall population has an equal chance of being selected
26. **Convenience sample**-sampling the most available subjects in the population to obtain quick results
27. **Systematic sample**- a sampling method in which one subject is selected at random, and subsequent subjects are selected according to a pattern

## Fractions

28. Fractions, decimals, and percents are parts of a **whole number**.
29. **Equivalent fractions** are fractions that name the same amount or part.
30. **Prime Number** has only two factors, one and itself, and a **Composite Number** has more than two factors.
31. **Multiple** is the product of a specific number and any other whole number.
32. A **mixed number** has a whole number with a fraction.
33. When the numerator is larger than the denominator, the fraction is called **improper**.
34. To turn a **mixed number** into an improper fraction, multiply the denominator by the whole number, then add this to the numerator and put this answer over the original denominator.  
Ex.  $2\frac{3}{4} = (2 \times 4) + 3 = \frac{11}{4}$
35. Find **common denominators** only when adding or subtracting fractions.
36. **GCF** - Greatest factor that two numbers have in common. (ex-GCF of 4 and 8 is 4)
37. **LCM** -Lowest number that is a common multiple of two or more numbers. (ex-LCM of 5 and 6 is 30)
38. **Reciprocal**-two numbers are reciprocals of each other if their product equals 1. ( $\frac{2}{3}$  and  $\frac{3}{2}$  are reciprocals)

## Algebra

39. **Exponent** tells you how many times the base is used as a factor, and **base** is a number used as a repeated factor. (ex.-  $4^3 = 4 \cdot 4 \cdot 4$ )
40. **Variable** - a symbol, usually a letter that stands for a number. Ex:  $y=5$
41. **Algebraic Expression** - an expression that contains at least one variable.
42. **Equation** a statement that shows that two quantities are equal.
43. **Numerical Expression**-an expression that uses only numbers and operation symbols
44. **square**-the product of a number and itself; a number with the exponent 2
45. **square root**-one of two equal factors of a number
46. **evaluate**- to find the value of a numerical or algebraic expression

## Ratios, Rates, & Proportions

47. A **ratio** is a comparison of two numbers, a and b, written in 3 ways: a to b, a:b, a/b
48. **Proportion** is an equation stating that two ratios are equal.
49. **Unit Rate** is a rate that has one (1) unit as its second term (\$5 per 1 book)

## Geometry

50. **X-axis** is the horizontal axis is the, and **Y-axis** is the vertical axis.
51. A **line** has arrows on both ends and this shows that it extends forever.
52. A **ray** has a point on one end and an arrow on the other showing that it extends forever in one direction.
53. A **line segment** has points on both ends showing that it has a fixed length.
54. **Parallel lines** are lines on the same plane that do not ever cross.

55. **Perpendicular lines** are lines that intersect to form right angles ( $90^\circ$ )
56. An **angle** is two rays attached at the vertex.
57. A **vertex** is the point where two rays meet to become an angle.
58. **Congruent** figures are figures that have the same size and shape.
59. **Similar** figures are the same shape, but different sizes.

## Angles

60. **Acute angles** measure less than 90 degrees.
61. **Right angles** measure exactly 90 degrees. (a perfect corner)
62. **Obtuse angles** measure more than 90 degrees.
63. **Straight angles** measure 180 degrees.
64. **Complementary Angles**-two angles whose measures have a sum of  $90^\circ$ .
65. **Supplementary Angles**- two angles whose measures have a sum of  $180^\circ$ .
66. **Vertical Angles**- a pair of opposite, congruent angles formed where two lines intersect.
67. **Adjacent Angles**- are side by side and share a common vertex and ray.

## Triangles

68. **Equilateral triangles** have all congruent sides and all angles are sixty degrees.
69. **Acute triangles** have all acute angles.
70. **Obtuse triangles** have one obtuse angle.
71. **Right triangles** have one right angle.
72. All angles in a triangle add up to **180 degrees**.
73. An **Isosceles triangle** has only 2 congruent sides.
74. A **Scalene triangle** has no congruent sides.

## Polygons

75. **Polygons** are closed shapes made with 3 or more line segments.
76. **Regular polygon**-a polygon in which all sides and angles are congruent.
77. **Quadrilaterals** - all polygons with 4 sides.
78. **Parallelograms** - quadrilaterals with two pairs of parallel sides.
79. **Rectangle** - a parallelogram with four right angles.
80. **Square** - a rectangle with four congruent sides and four right angles.
81. **Pentagons** have 5 sides, **hexagons** have 6 sides, **heptagons** have 7 sides, **octagons** have 8 sides, **nonagons** have 9 sides, and **decagons** have 10 sides.

## Circles

82. A line that crosses from one side of a circle to the other but not necessarily through the middle is a **chord**.
83. Line that passes through the center of a circle from one edge to the other is a **diameter**.
84. Line that passes from center of a circle to the edge is a **radius**.
85. The distance around a circle is the **circumference**. The formula is  $C = \pi \times d$ .
86. Pi is the ratio of the circumference of a circle to its diameter. It rounds to 3.14.

## Measurement

87. **Perimeter** is the distance around the outside edge of a polygon.
88. **Area** is the number of square units needed to cover a given surface:
- Area of rectangle =  $l \cdot w$
  - Area of triangle =  $\frac{b \times h}{2}$
  - Area of parallelogram =  $b \times h$
  - Area of a trapezoid =  $\frac{(b_1 + b_2) \times h}{2}$
  - Area of a circle =  $\pi \times r^2$
89. **Time** measurements and conversions: 60 seconds = 1 minute; 60 minutes = 1 hour; 24 hours = 1 day; 7 days = 1 week; 52 weeks = 1 year; 365 days = 1 year.
90. **Volume formula:**
- rectangular prism/cube:  $l \cdot w \cdot h$
  - cylinder:  $area\ of\ base\ (\pi r^2) \cdot h$  of prism
  - triangular prism:  $area\ of\ base\ (\frac{1}{2} b \cdot h) \cdot h$  of prism
91. **Metric Measurement** prefixes: kilo=1000, hecto=100, deka=10, deci=0.1, centi=0.01, milli=0.001
92. **Standard Measurement:** 12 inches = 1 foot; 3 feet = 1 yard; 5, 280 feet = 1 mile

## Math Properties

93. **Subtraction Property of Equality**-if you subtract the same number from both sides of an equation, the sides remain equal
94. **Multiplication Property of Equality**- if you multiply both sides of an equation by the same number, the sides remain equal
95. **Division Property of Equality**- if you divide both sides of an equation by the same number, the sides remain equal
96. **Addition Property of Equality**-if you add the same number to both sides of an equation, the sides remain equal
97. **Identity Property of Zero**
- Addition-when you add zero to any number, the sum is that same number
  - Multiplication-any number multiplied by zero is zero
98. **Commutative Property**-when the order of factors or addends is changed, the product or sum remains the same
99. **Associative Property**-when the grouping of factors or addends is changed, the product or sum remains the same
100. **Distributive Property**-In multiplication, when a number is split apart to solve an equation, the product remains the same

# While You Were Out

Absentee's Name: \_\_\_\_\_

You were absent on M T W H F \_\_\_\_\_

You missed:

these activities during class:

(Circle any that apply)

activity notes lecture experiment writing reading  
discussion project group work test quiz other

Start making up that work!! If you have a question, you can ask me first.

Class Scribe \_\_\_\_\_

Here is a BRIEF explanation of what we did:

subject

Rdg. L/A Sci. Math S.S. \_\_\_\_\_

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Rdg. L/A Sci. Math S.S. \_\_\_\_\_

Rdg. L/A Sci. Math S.S. \_\_\_\_\_

Rdg. L/A Sci. Math S.S. \_\_\_\_\_

subject these homework assignments:

Rdg. L/A Sci. Math S.S. \_\_\_\_\_

Rdg. L/A Sci. Math S.S. \_\_\_\_\_

Rdg. L/A Sci. Math S.S. \_\_\_\_\_

Rdg. L/A Sci. Math S.S. \_\_\_\_\_

Rdg. L/A Sci. Math S.S. \_\_\_\_\_

subject Test/Quiz date announced:

Topic

Date

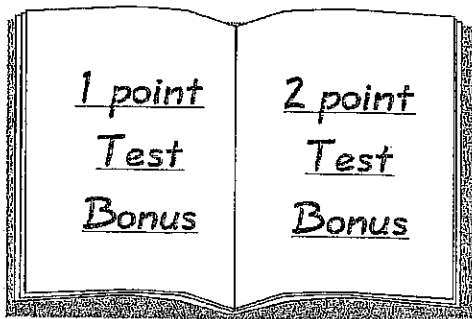
Rdg. L/A Sci. Math S.S. \_\_\_\_\_

Rdg. L/A Sci. Math S.S. \_\_\_\_\_

Rdg. L/A Sci. Math S.S. \_\_\_\_\_

an announcement:

Thanks for getting our absentees started with their missed work.



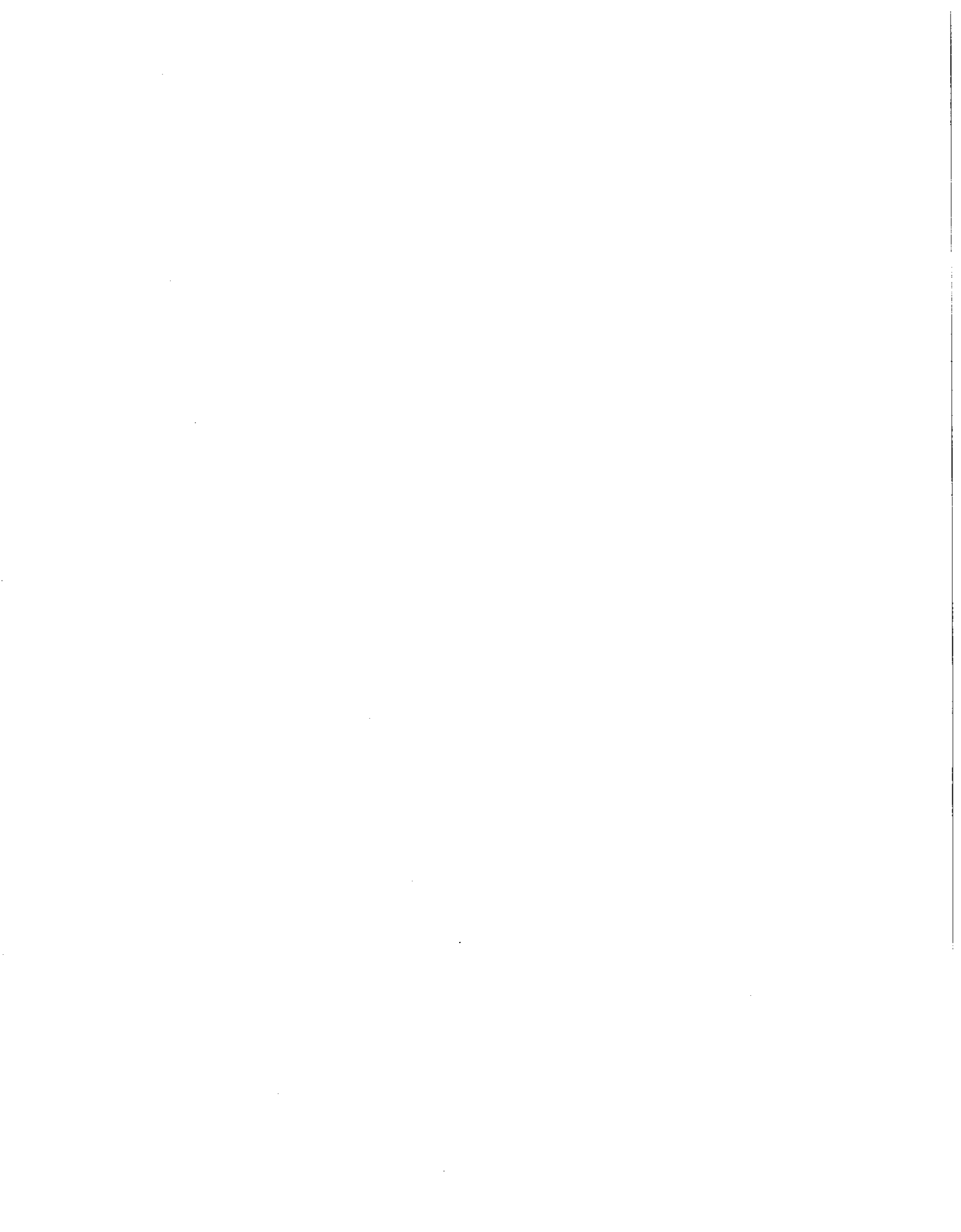
Staple this coupon to the test or quiz of your choice,

Name \_\_\_\_\_

Date \_\_\_\_\_

## Directions:

1. Accurately fill out the form above.
2. Collect any papers handed out today.
3. Cut along the dotted lines.
4. Paper clip together the: coupon form hand-outs
5. Put completed packet in the absentee folder in your ELA teacher's room NO LATER THAN 8:30AM tomorrow morning.
6. If everything is neat and complete, your teacher will validate your coupon and return it to you.



# Graphic Organizers

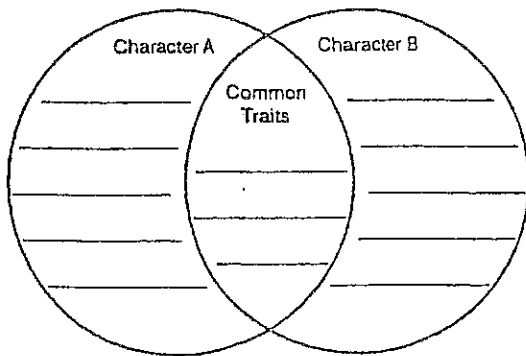
**K-W-L Chart**

K What We Know	W What We Want to Know	L What We Learned

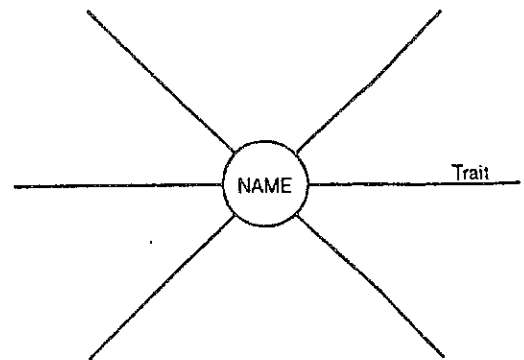
**Knowledge Chart**

Prior knowledge about _____	New knowledge about _____
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.
9.	9.

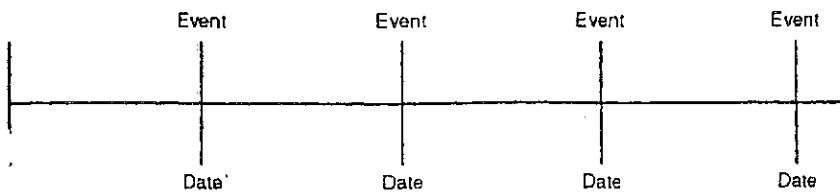
**Venn Diagram**



**Semantic Map**



**Time Line**



**Cause/Effect Chart**

