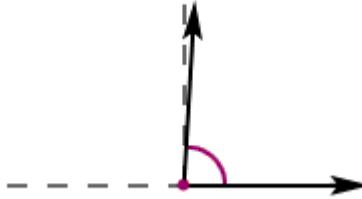1. **acute angle :**

An angle that measures less than a right angle (90°).
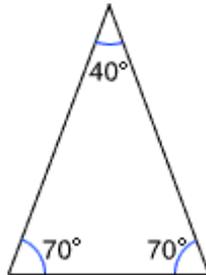
Example:

2. **acute triangle :**

A triangle that has three acute angles
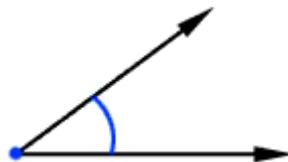
Example:

3. **angle :**

A figure formed by two rays that meet at a common endpoint

Example:

4. **associative property of multiplication :**

The property which states that when multiplying three or more factors , any two of the factors can be multiplied, and the remaining factors may then be multiplied without changing the total product
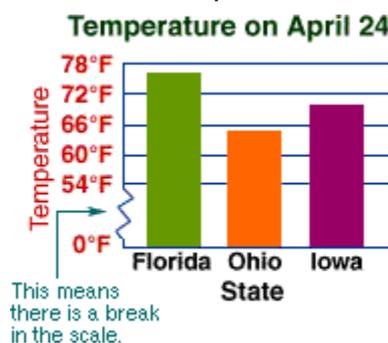
Example:

(3 X 4) X 5 = 3 X (4 X 5)

12 X 5 = 3 X 20

60 = 60

5. bar graph :

A graph that compares facts about groups

Example:

6. base :

A number used as a repeated factor

Example:
base $\longrightarrow 8^3$
The number 8 is the base.

7. benchmark :

Numbers like 10, 25, 50, or 100 that are used to help make estimates

8. benchmark percent :

A commonly used percent that is close to the amount you are estimating
Examples:

25% is a good benchmark for amounts close to $\frac{1}{4}$.

50% is a good benchmark for amounts close to $\frac{1}{2}$.

10%, 75%, and 100% are other common benchmark percents.
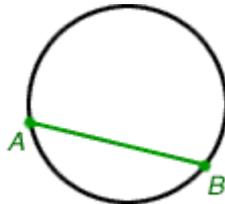
9. cardinal :

A number that tells how many
Examples:
4 puppies

93 cents

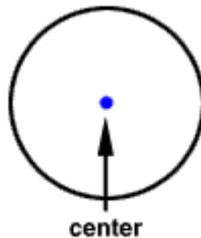## 10. chord :

A line segment with endpoints on a circle
Example:

11.   circle :

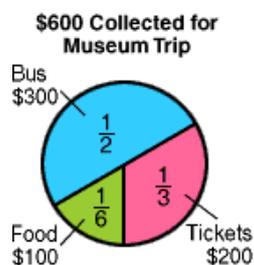A closed figure with all points on the figure the same distance from the center point
Example:

center

12.   circle graph :

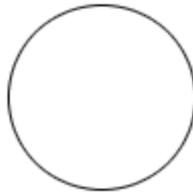A graph in the shape of a circle that shows fractions, percents, or decimals as parts of a whole
Example:

$600 Collected for Museum Trip

13.   circumference :

The perimeter of a circle

Example:

14.   common factor :

A number that is a factor of two or more numbers
Example:

factors of 6:	1, 2, 3, 6
factors of 12:	1, 2, 3, 4, 6, 12

The common factors of 6 and 12 are
1, 2, 3, and 6.

15.   common multiple :

A number that is a multiple of two or more numbers
Example:

multiples of 4:	4, 8, 12, 16, 24
multiples of 6:	6, 12, 18, 24

A common multiple of 4 and 6 is 24

16.   commutative property of addition :

The property which states that addends can be added in any order. The sum is always the same
Example:
$$2.67 + 1.32 = 1.32 + 2.67$$
$$3.99 = 3.99$$

17. commutative property of multiplication :

The property which states that factors can be multiplied in any order. The product is always the same.
Example:
$$5 \times 7 = 7 \times 5$$
$$35 = 35$$

18. compatible numbers :

Pairs of numbers that are easy to compute mentally
Examples:

So, the sum of 48 + 51 + 85 + 16 is about 200.

Estimate the quotient. 431 ÷ 5

What is 431 ÷ 5?

Think: 400 ÷ 5 = 80
or 450 ÷ 5 = 90

So, 431 ÷ 5 ≈ 80 or 90

```
      86 r1
  5 )431
    - 40
      31
    - 30
       1
```

Since 43 tens can be divided by 5, the first digit of the quotient is in the tens place.

19. composite numbers :
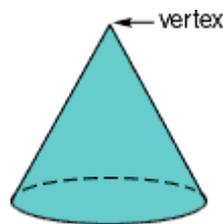
Numbers that have more than two factors

Examples:

Composite Numbers			Not Composite Numbers	
Number	Factors		Number	Factors
4	1, 2, 4		1	1
6	1, 2, 3, 6		2	1, 2
8	1, 2, 4, 8		3	1, 3
9	1, 3, 9		5	1, 5

20. cone :

A solid figure with a circular base and one vertex

Example:

vertex

21. congruent :

Having the same size and shape

22. congruent figures :

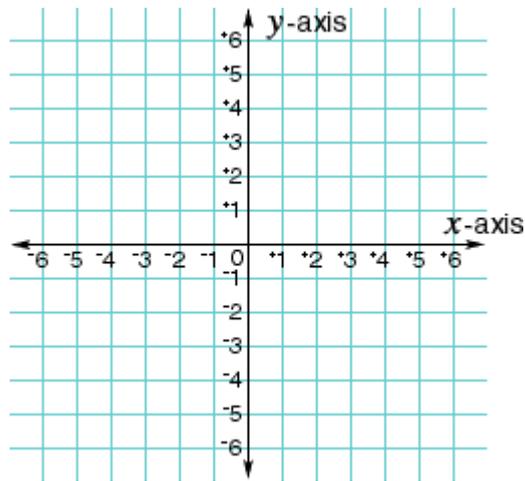Figures that have the same size and shape

Example:

The triangles are congruent

23. coordinate plane :

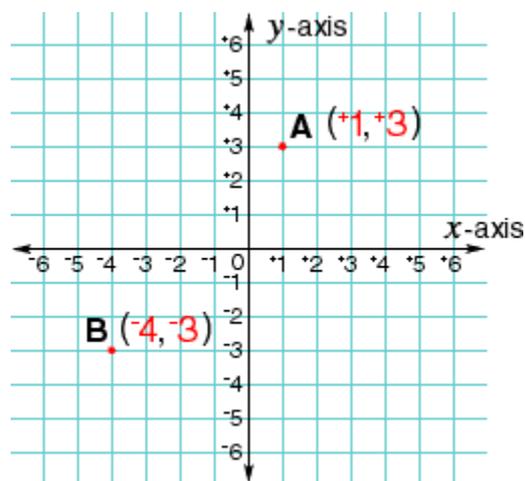A plane formed by two intersecting and perpendicular number lines

Example:

24. coordinates :

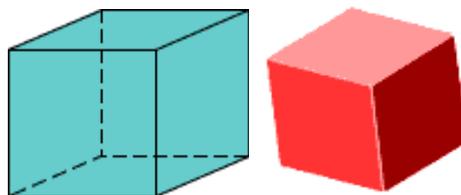An ordered pair of integers that name a point on a coordinate plane

Example:

25. cube :

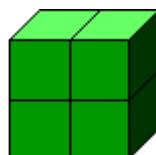A solid figure with six congruent square faces

Examples:

26. cubic units :

The number of cubes with dimensions of 1 unit X 1 unit X 1 unit that can fit inside of a solid figure, that gives the volume
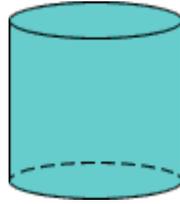
Example:

4 cubic units

27. cylinder :

A solid figure with two parallel bases that are congruent circles
Example:

28. decimal :

A number that uses place value and a decimal point to show values less than one, such as tenths and hundredths
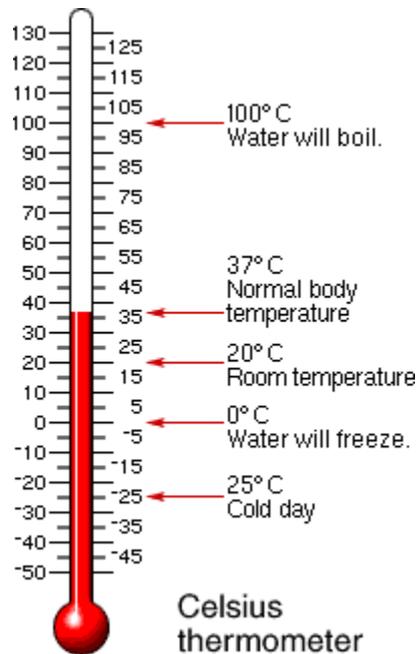*Example*:   3.47

29. decimal number system :

A place value number system based on grouping by tens; each place has a value 10 times the value of the place at its right.

30. degree :

A unit for measuring angles and for measuring temperature

31. degrees Celsius :

A standard unit for measuring temperature in the metric system

100° C
Water will boil.

37° C
Normal body
temperature

20° C
Room temperature

0° C
Water will freeze.

25° C
Cold day

Celsius
thermometer

32. degrees Fahrenheit :

A standard unit for measuring temperature in the customary system

220 — 215
210 — ← 212°F
       Water will boil.

100 — 95 ← 98.6°F
90 — 85   Normal body
80 — 75   temperature
70 — 65 ← 68°F
60 — 55   Room temperature
50 — 45
40 — 35 ← 32°F
30 — 25   Water will freeze.
20 — 15
10 — 5
0 — -5
-10 —

Fahrenheit
thermometer
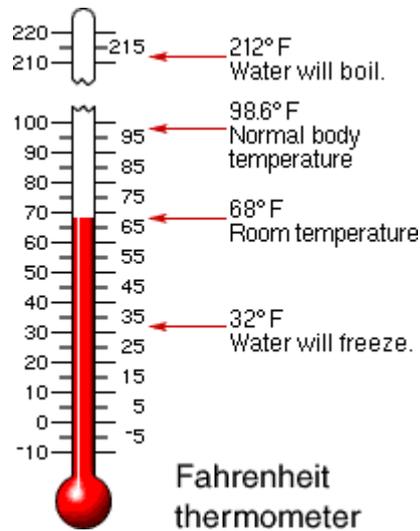
33. diameter :

A line segment that passes through the center of a circle and has its endpoints on the circle

Example:

diameter *OP*
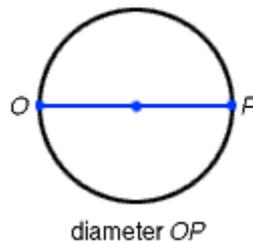
34. distributive property of multiplication :

The property which states that multiplying a sum by a number is the same as multiplying each addend by the number and then adding the products

Example:

3 X (4 + 2)	= (3 X 4) + (3 X 2)
3 X 6	= 12 + 6
18	= 18

35. dividend :

The number that is being divided in a division problem

Examples:

$$35 \div 5 = 7 \qquad 5\overline{)35}^{\,7}$$

The dividend is 35.

36. divisible :

A number is divisible by another number if the result of the division is a whole number and the remainder is zero

Example:

18 is divisible by 3.

37. divisor :

The number that divides the dividend

Examples:

$$18 \div 3 = 6 \qquad 3\overline{)18}^{\,6}$$

The divisor is 3.

38. equation :

A number sentence that uses the equals sign to show that two amounts are equal
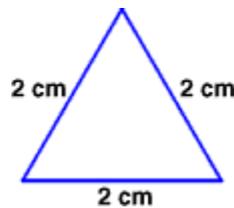
Examples:

$$3 + 7 = 10$$
$$4 - 1 = 3$$
$$12 + n = 21$$

39. equilateral triangle :

A triangle with three congruent sides

Example:

40. equivalent decimals :
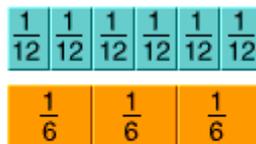
Decimals that name the same number or amount

Example:

$$0.5 = 0.50 = 0.500$$

41. equivalent fractions :

Fractions that name the same amount or part

Example:

$$\frac{3}{6} = \frac{6}{12}$$

42. equivalent ratios :

Ratios that name the same comparisons

Example:

The ratio of yellow to red is $\frac{2}{4}$ or $\frac{1}{2}$.

The ratios $\frac{2}{4}$ and $\frac{1}{2}$ are equivalent.

$$\frac{2}{4} = \frac{1}{2}$$

43. estimate :

To find an answer that is close to the exact answer

44. expanded form :

A way to write numbers by showing the value of each digit

Examples:

635 = 600 + 30 + 5

1,479 = 1,000 + 400 + 70 + 9

45. exponent :

The number that shows how many times a base is used as a factor

Example:

$$\text{base} \rightarrow 8^{3} = 8 \times 8 \times 8 \quad \leftarrow \text{exponent}$$

The exponent is 3, indicating that 8 is used as a factor 3 times

46. expression :

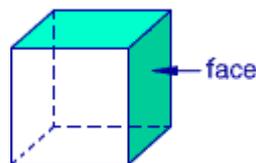A part of a number sentence that combines numbers and operation signs

Examples:

4 + 3   9 − 2

3 X (2 + 6)   4 + *n*

47. face :

A flat surface of a solid figure

Example:

48. factor :

A number multiplied by another number to find a product
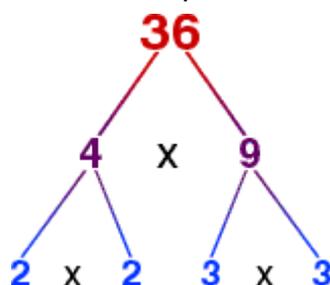
Example:

$$2 \times 4 = 8$$
factor   factor   product

49. factor tree :

A diagram that shows the prime factors of a composite number

Example:

50. formula :
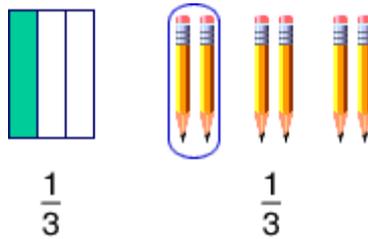
A set of symbols that expresses a mathematical rule

Example:

formula for area of a rectangle:

Area = length X width or *A = l* X *w*

51. fraction :

A number that names part of a whole or part of a group
Example:

$$\frac{1}{3} \qquad \frac{1}{3}$$

52. frequency table :

A table that organizes the total for each category or group
Example:

FREQUENCY TABLE			
Day	Number of Students (Frequency)	Total Number of Students (Cumulative Frequency)	
Monday	15	15	
Tuesday	13	28	← 15 + 13 = 28
Wednesday	5	33	← 28 + 5 = 33
Thursday	9	42	← 33 + 9 = 42
Friday	17	59	← 42 + 17 = 59

53. greater than (>) :

A symbol used to compare two numbers, with the greater number given first
Example:
8 > 6
8 is greater than 6.

54. greatest common factor (GCF) :

The greatest factor that two or more numbers have in common
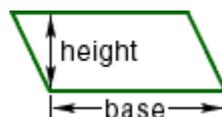*Example*:
18: 1, 2, 3, **6**, 9, 18
30: 1, 2, 3, 5, **6**, 10, 15, 30
6 is the GCF of 18 and 30.

55. height :

In a polygon, the length of a line segment that goes from a vertex to the opposite side, and is perpendicular to the opposite side
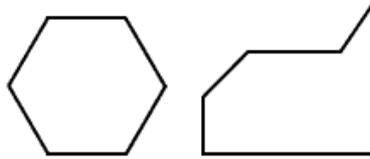*Example*:

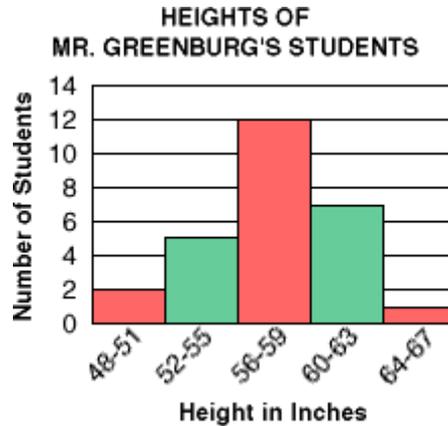height
|—base—|

56. hexagon :

A polygon with 6 sides and 6 angles
Examples:

57. histogram :

A bar graph that shows the number of times data occur within certain ranges or intervals

Example:

HEIGHTS OF MR. GREENBURG'S STUDENTS

(histogram with y-axis "Number of Students" from 0 to 14 and x-axis "Height in Inches" with intervals 48-51, 52-55, 56-59, 60-63, 64-67)

58. inequality :

A mathematical sentence that shows that two expressions do not represent the same quantity
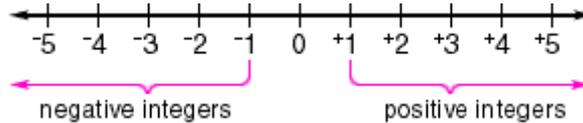
Examples:

$2 \times 3 < 8$ $6 + 5 > 9$

is less than   is greater than

59. integer :

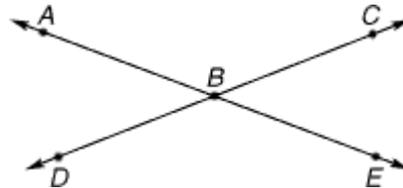Any one of the numbers . . . , ⁻3, ⁻2, ⁻1, 0, 1, 2, 3, . . .

Example:

⁻5 -4 ⁻3 -2 ⁻1 0 ⁺1 ⁺2 ⁺3 ⁺4 ⁺5

negative integers   positive integers

60. intersecting lines :

Two or more lines that cross at exactly one point

Example:

A   C

B

D   E

61. interval :

The distance between the numbers on the scale of a graph

Example:

FOURTH-GRADE FUND-RAISER

Class: Clark, Green, Baum, Call

0 5 10 15 20 25 30 35 40 45 50 55
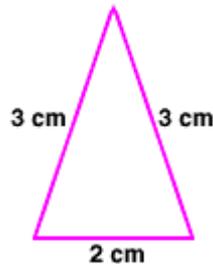**Dollars Earned**

The interval is 5.
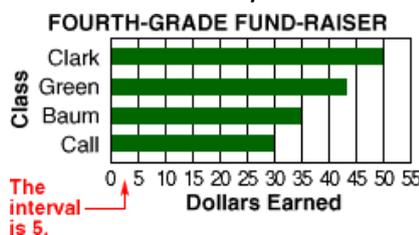
62. inverse operations :

Opposite operations that undo each other; addition and subtraction are inverse operations; multiplication and division are inverse operations.

63. isosceles triangle :

A triangle with two congruent sides and two congruent angles
Example:

64. least common denominator (LCD) :

The least common multiple of two or more denominators
Example:

$$\frac{1}{4} = \frac{3}{12}$$

$$\frac{5}{6} = \frac{10}{12}$$

LCD for $\frac{1}{4}$ and $\frac{5}{6}$

65. least common multiple (LCM) :

The least number other than zero, that is a   multiple of two or more given numbers
Example:
multiples of 6: 6, 12, **18**, 24, 30, 36
multiples of 9: 9, **18**, 27, 36, 45, 54
The LCM of 6 and 9 is 18.

66. less than (<) :

A symbol used to compare two numbers, with the lesser number given first
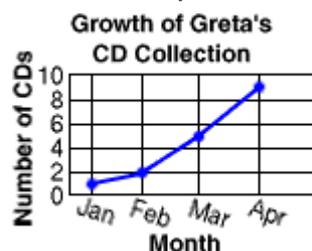*Example*:
6 < 8
6 is less than 8.

67. line graph :

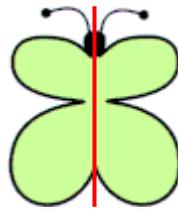A graph that uses line segments to show how data change over a period of time
Example:

68. line of symmetry :

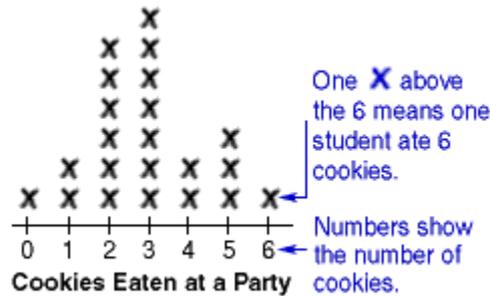A line that divides a figure so that the two parts of the figure are congruent

Example:

69. line plot :

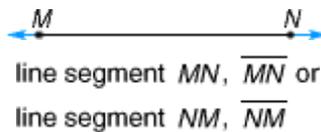A diagram that shows the frequency of data as they are collected

Example:

One **X** above the 6 means one student ate 6 cookies.

Numbers show the number of cookies.

0 1 2 3 4 5 6

Cookies Eaten at a Party

70. line segment :

Part of a line with two endpoints

Example:

M   N

line segment MN, $\overline{MN}$ or
line segment NM, $\overline{NM}$

71. map scale :

A ratio that compares the distance on a map with the actual distance

Example:

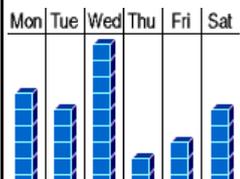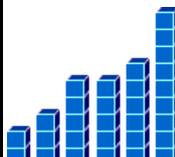cm   0   1   2   3

mi   0   100   200   300

The scale is 1 cm to 100 mi.

72. mean (average) :

One way to find a number that best represents all the numbers in a set

Examples:

Step 1	Step 2
Use unit cubes. Make 6 stacks of cubes to model the number of tickets sold each day.	Arrange the stacks in order from the shortest to the tallest.
Mon Tue Wed Thu Fri Sat	

Step 3
To find the mean, move the cubes so the 6 stacks are equal in height. The number of cubes in each stack is the mean.
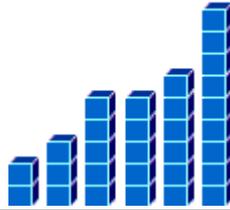
Find the mean: 2, 3, 5, 5, 6, 9
2 + 3 + 5 + 5 + 6 + 9 = 30
30 ÷ 6 = 5
The mean is 5.

73. median :

The middle number in an ordered list of numbers
Example:

1, 3, **4**, 6, 7
↑——median

The median of 1, 3, 4, 6, and 7 is 4.

74. mixed number :

A number that is made up of a whole number and a fraction
Example:

$2\frac{1}{2}$

75. mode :

The number that occurs most often in a list of data
Example:

1, 3, **4**, **4**, 6
↑——4 occurs most often.

The mode of 1, 3, 4, 4, and 6 is 4.

76. multiple :

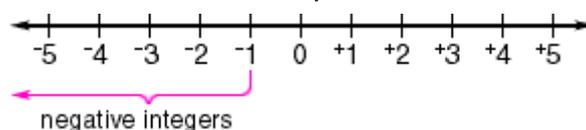A number that is the product of a given number and a whole number
Example:

| 10 | 10 | 10 | 10 |
| ×1 | ×2 | ×3 | ×4 |
| 10 | 20 | 30 | 40 | ← multiples of 10

77. negative integers :

Integers less than zero
Example:

negative integers

78. nominal :

A number that names a thing

Examples:

79. numerator :
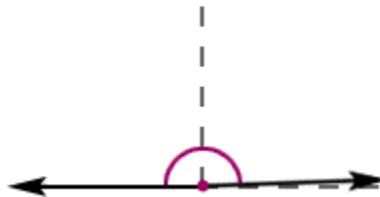
The top part of a fraction

Example:

$$\frac{3}{4} \leftarrow \text{numerator}$$

80. obtuse angle :

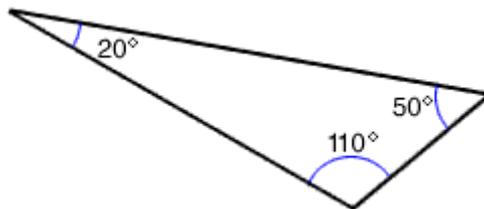An angle whose measure is greater than 90° and less than 180°

Example:

81. obtuse triangle :
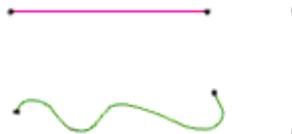
A triangle that has one obtuse angle

Example:

20°

50°

110°

82. one–dimensional :

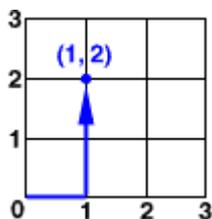A measure in only one direction, such as length

Examples:

83. ordered pair :

A pair of numbers used to locate a point on a grid

Example:

(1,2) represents 1 space to the right of zero and 2 spaces up.

84. order of operations :

The correct order in which the operations are done within an expression

1.	Do the operations inside parentheses.
2.	Multiply and divide from left to right.
3.	Add and subtract from left to right.

Example:

6 + (4 X 2) ÷ 2 − 5	*Multiply inside parentheses.*
6 + 8 ÷ 2 − 5	*Divide.*
6 + 4 − 5	*Add.*
10 − 5	*Subtract.*

85. ordinal :
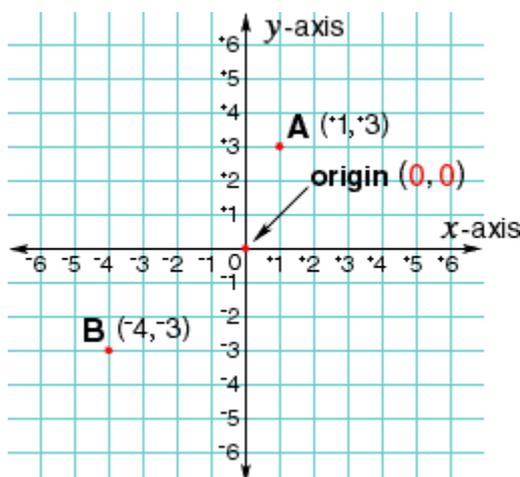
A number that tells position or order

Examples:
Jon won first place.

Jean is 4th in line.

86. origin :

The point on a coordinate plane where the *x*-axis and the *y*-axis intersect

Example:

87. parallel lines :

Lines in a plane that stay exactly the same distance apart

Example:

88. parallelogram :

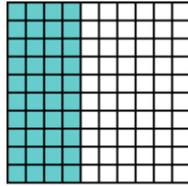A quadrilateral whose opposite sides are parallel and congruent

Example:

89. percent :

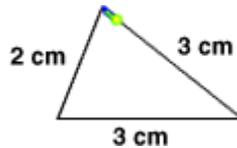A ratio of some number to 100; The symbol for *percent* is %.

Example:

$$\frac{40}{100} = 40\%$$

40% of the squares are shaded.

90. perimeter :

The distance around a figure

Example:

2 cm + 3 cm + 3 cm = 8 cm
The perimeter of this figure is 8 centimeters

91. period : Each group of three digits in a number

Example:

PERIODS
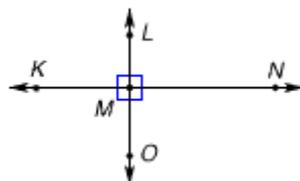
Millions	Thousands	Ones
5 6 7,	2 3 6 ,	4 5 1

92. perpendicular lines :

Two lines that intersect to form four right angles

Example:

93. pi :

The ratio of the circumference of a circle to the length of its diameter

$$(\pi \approx 3.14)$$

94. place value :

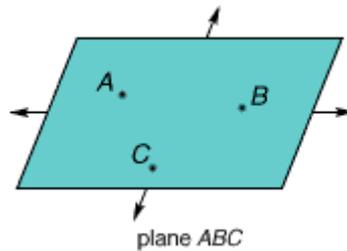The value of a digit as determined by its position in a number
Example:

	Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths
PLACE VALUE										
1,623,051→	1	6	2	3	0	5	1			
0.053→							0	0	5	3
32.4→						3	2	4		

95. plane :

A flat surface that extends without end in all directions
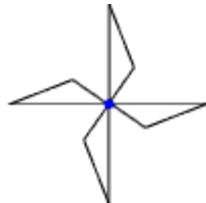*Example*:

plane *ABC*

Planes are named by three points in the plane.

96. point symmetry :

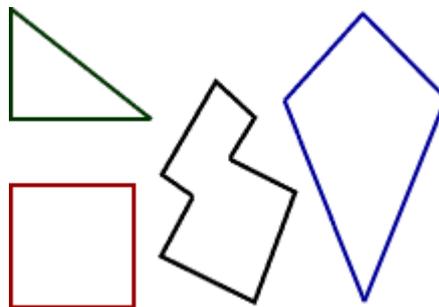When a figure can be turned about a central point and still look the same
Example:

97. polygon :
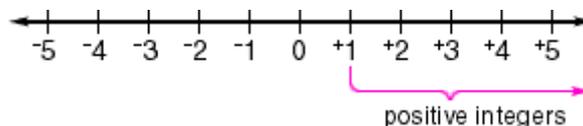
A closed plane figure with straight sides
Examples:

98. positive integers :

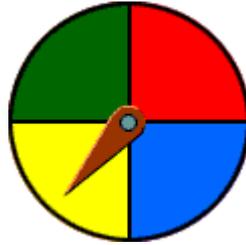Integers greater than zero

Example:

positive integers

99. possible outcome :

Something that has a chance of happening in an experiment
Example:

The possible outcomes for the spinner are red, blue, green, and yellow.

100. precise :

Finding a unit that measures nearest to the actual length of an object
Example:

Length to nearest $\frac{1}{2}$-inch: 1 inch

Length to nearest $\frac{1}{4}$-inch: $1\frac{1}{4}$ inch

$1\frac{1}{4}$ inch is a more precise measurement.

101. prime factorization :

When a composite number is written as a product of prime factors
Example:

$12 = 2 \times 2 \times 3 = 2^2 \times 3$ ← prime factorization

102. prime numbers :

Numbers that have only two factors, 1 and the number itself
Examples:

Prime			Not Prime	
Number	Factors		Number	Factors
2	1, 2		4	1, 2, 4
3	1, 3		6	1, 2, 3, 6
5	1, 5		9	1, 3, 9

103. prism :

A solid figure whose ends are congruent, parallel polygons, and whose sides are rectangles
Example:

rectangular prism

104. probability :

The chance that a given event will occur

$$\text{Probability} = \frac{\text{number of ways the event occurs}}{\text{number of ways all events can occur}}$$

105. product : The answer in a multiplication problem

Example:

	6
6 X 2 = 12	× 2
	12

The product is 12.

106. property of one for multiplication :

The property which states that the product of any number and 1 is that number
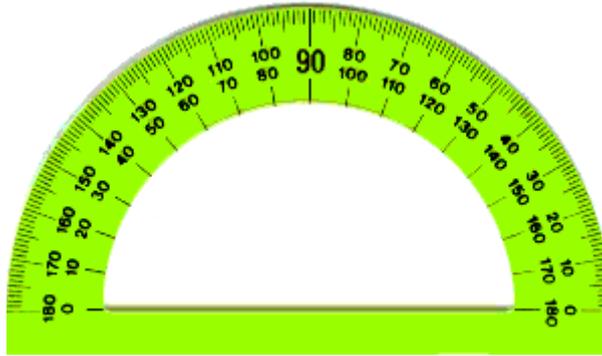
Examples:

5 X 1 = 5

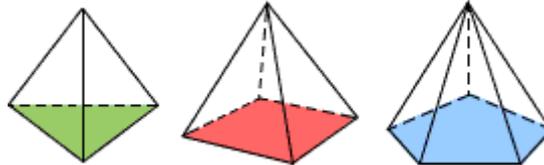16 X 1 = 16

107. protractor :

A tool for measuring the size of the opening of an angle

108. pyramid :

A solid figure with a base that is a polygon and three or more faces that are triangles with a common vertex

Examples:

triangular pyramid   square pyramid   pentagonal pyramid

109. quadrilateral :

A polygon with four angles and four sides

Examples:

110. quotient :
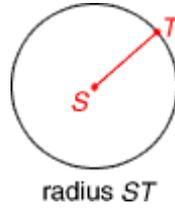
The answer in a division problem

Example:

$$35 \div 5 = 7 \qquad 5\overline{)35}^{7}$$

The quotient is 7.

111. radius :

A line segment with one endpoint at the center of a circle and the other endpoint on the circle

Example:

radius *ST*

112. ratio :

A comparison of two numbers

Example:

Compare:	Ratio:	Type of Ratio:
red counters to all counters	2 to 5	part to whole
all counters to red counters	5 to 2	whole to part
red counters to yellow counters	2 to 3	part to part

113. ray :

A part of a line that begins at one endpoint and extends forever in only one direction

ray *FG*

114. rectangle :

A polygon with 4 sides and 4 right angles

Example:

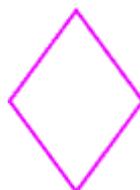## 115. rhombus :

A parallelogram whose four sides are congruent and whose opposite angles are congruent
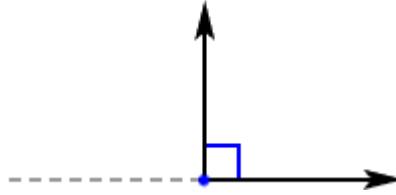
Example:

116. right angle :

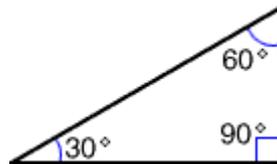An angle that forms a square corner and measures 90°

Example:

117. right triangle :
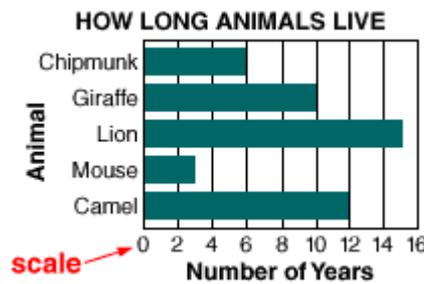
A triangle with exactly one right angle

Example:

60°
30°
90°

118. scale :

A series of numbers placed at fixed distances on a graph to help label the graph

Example:

HOW LONG ANIMALS LIVE

Chipmunk
Giraffe
Lion
Mouse
Camel

Animal
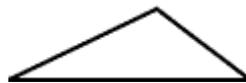
scale →
0 2 4 6 8 10 12 14 16
Number of Years

119. scalene triangle :

A triangle with three unequal angles and sides that are not congruent

Example:

120. scientific notation :

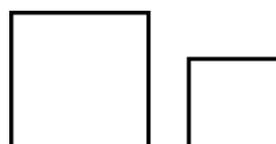A method of writing very large or very small numbers by using powers of 10

Example:

$1,200,000 = 1.2 \times 10^6$

121. similar figures :

Figures that have the same shape but may not have the same size

Example:

122. simplest form :

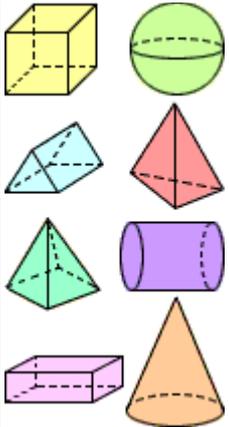A fraction that has 1 as the greatest common factor of the numerator and denominator

Example:

$\frac{6}{18}$ in simplest form is $\frac{1}{3}$.

123. solid figure :

A three-dimensional figure

Examples:

cube		sphere
triangular prism		triangular pyramid
square pyramid		cylinder
rectangular prism		cone

124. standard form :

A way to write numbers using the digits 0-9, with each digit having a place value
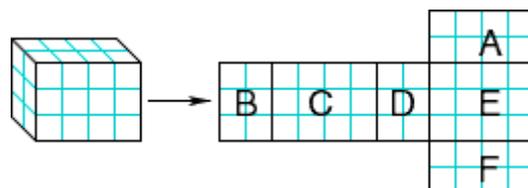
Example:

12,543

125. surface area :

The sum of the areas of the faces of a solid figure

Example:

Surface Area = A + B + C + D + E + F

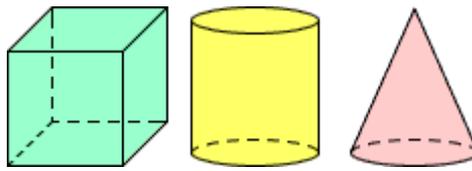= 8 + 6 + 12 + 6 + 12 + 8 = 52, or 52 units^2

126. tessellation :

A repeating pattern of closed figures that covers a surface with no gaps and no overlaps

127. three-dimensional :

A measure in three directions, such as length, width, and height
Examples:

128. transformation :

The movement of a figure, either a translation, rotation, or reflection

129. trapezoid :

A quadrilateral with only two parallel sides
Example:

130. tree diagram :

An organized list that shows all possible outcomes of an event
Example:

Pants	Shirts	Choices (Outcomes)
blue	red	blue pants with red shirt
	green	blue pants with green shirt
	white	blue pants with white shirt
tan	red	tan pants with red shirt
	green	tan pants with green shirt
	white	tan pants with white shirt

So, there are 6 possible outcomes

131. two-dimensional :

A measure in two directions, such as length and width
Examples:
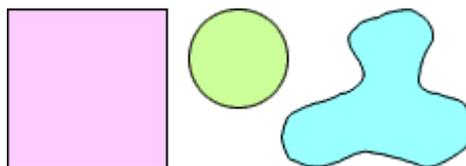
132. unlike fractions :

Fractions that have different denominators
Example:

$\frac{3}{4}$ and $\frac{2}{3}$

133. variable :

A letter or symbol that stands for one or more numbers
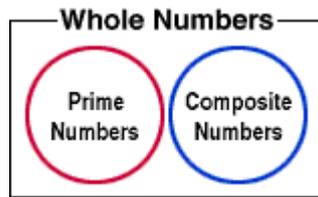*Examples*:

$5 + n$ $k - 3$

134. venn diagram :

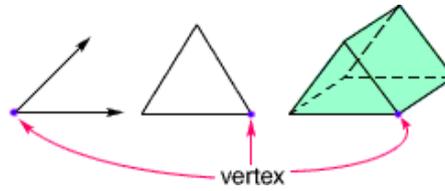A diagram that uses geometric shapes to show relationships
Example:

135. vertex :

The point where two rays of an angle, two sides of a polygon, or three or more edges of a solid figure meet
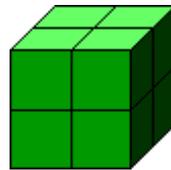
Examples:

vertex

136. volume :

The measure of the space a solid figure occupies
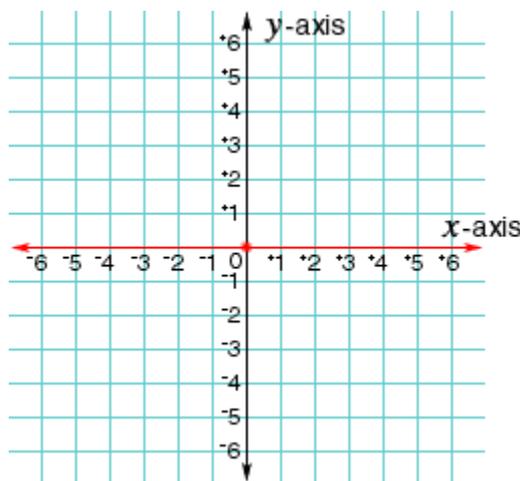
Example:

The volume of the cube is 8 cubic units.

137. x-axis :
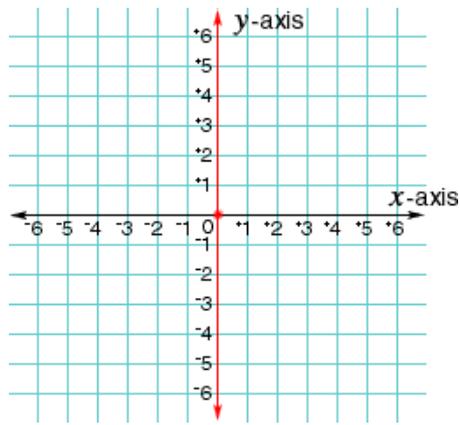
The horizontal axis on the coordinate plane

Example:

138. y-axis :

The vertical axis on the coordinate plane

Example:

139. zero property for multiplication :

The property which states that the product of zero and any number is zero

Examples:

13 X 0 = 0

0 X 7 = 0