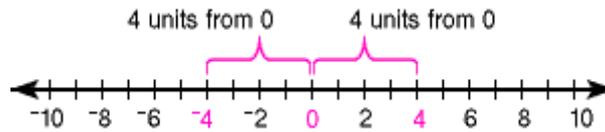


1. absolute value :

The distance from a point on the number line to zero

Example:

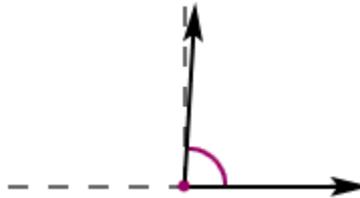
$$|-4| = 4; \quad |4| = 4$$



2. acute angle :

An angle whose measure is greater than 0° and less than 90°

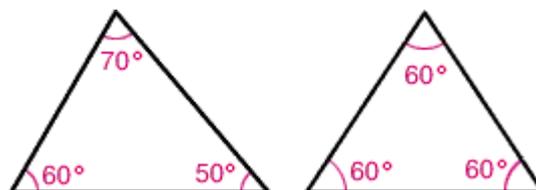
Example:



3. acute triangle :

A triangle in which all three angles are acute

Example:



4. addition property of opposites :

The property which states that the sum of a number and its opposite is zero

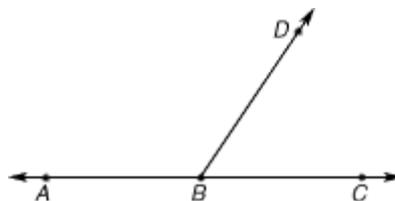
Examples:

$$5 + ^{-}5 = 0 \quad ^{-}15 + 15 = 0$$

5. adjacent angles :

Angles that share a common side, have the same vertex, and do not overlap

Example:



$\angle ABD$ is adjacent to $\angle DBC$.

6. algebraic expression :

An expression that is written using one or more variables

Examples:

$$3x \quad x - 4 \quad 2a + 5 \quad a + b$$

7. angle :

A geometric figure formed by two rays that have a common endpoint

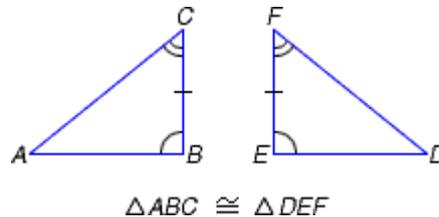
Examples:



8. angle-side-angle (ASA) :

A triangle congruence rule stating that when two angles and the included side of one triangle are congruent to two angles and the included side of another triangle, the two triangles are congruent

Example:



9. arithmetic sequence :

An ordered list of numbers in which the difference of any term and the one after it is always the same

Example:

5, 9, 13, 17, 21,...

The common difference is 4.

10. associative property of addition :

The property which states that for all real numbers a , b , and c , their sum is always the same, regardless of their grouping:

$$(a + b) + c = a + (b + c)$$

Example:

$$(2 + 3) + 4 = 2 + (3 + 4)$$

11. associative property of multiplication :

The property which states that for all real numbers a , b , and c , their product is always the same, regardless of their grouping:

$$(a \cdot b) \cdot c = a \cdot (b \cdot c)$$

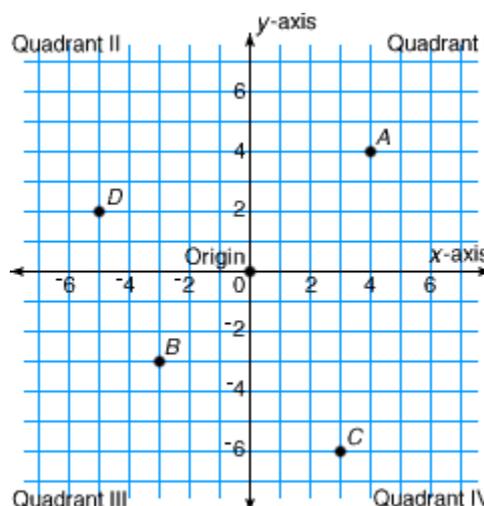
Example:

$$(5 \cdot 6) \cdot 7 = 5 \cdot (6 \cdot 7)$$

12. axes :

Two perpendicular lines that intersect to form the coordinate plane

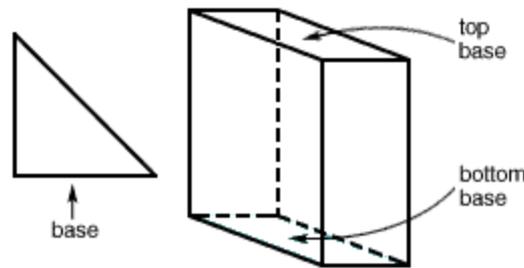
Example:



13. base :

A side of a polygon or a face of a solid figure by which the figure is measured or named

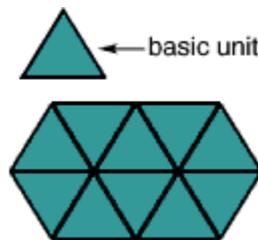
Examples:



14. basic unit :

In a tessellation, a figure that is repeated to make a pattern

Example:



15. bimodal :

Having two modes in a set of data

Example:

12, 19, 34, 12, 21, 19, 17, 42

The set of data is bimodal since there are two modes, 12 and 19.

16. binary number system :

A number system in which all numbers are expressed using only two digits, 0 and 1

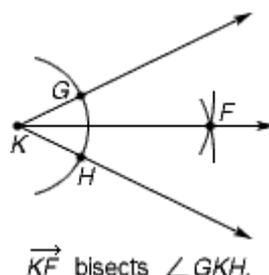
Example:

The number 42 in our decimal number system is 101010_{two} .

17. bisect :

To divide into two congruent parts

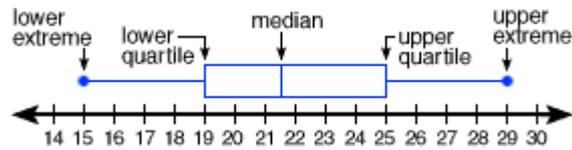
Example:



18. box-and-whisker graph :

A graph that shows how far apart and how evenly data are distributed

Example:



19. cell :

In a spreadsheet, a block area in which data or formulas can be entered; the cell is located by an address consisting of a letter and a number

Example:

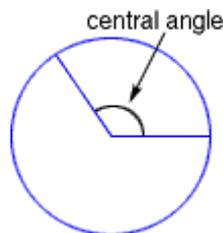
	A	B	C	D	E
1	Month	Interest (1.5%)	Balance	Payment	New Balance
2	January	\$0	\$100.00	\$20.00	\$80.00
3	February	\$1.20	\$81.20	\$20.00	\$61.20
4	March	\$0.92	\$62.12	\$20.00	\$42.12
5	April	\$0.64	\$42.76	\$20.00	\$22.76
6	May	\$0.35	\$23.11	\$20.00	\$3.11
7	June	\$0.05	\$3.16	\$3.16	\$0
8	Total	\$3.16		\$103.16	

The months are listed in cells A2, A3, A4, A5, A6, and A7.

20. central angle :

An angle formed by two rays with a common vertex at the center of a circle

Example:



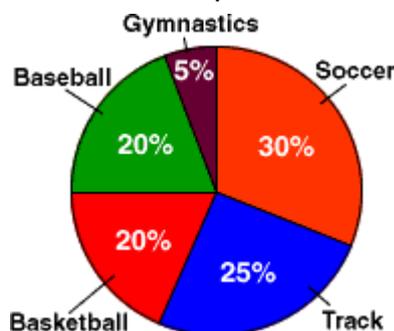
21. central tendency :

Any of three measures (mean, median, mode) that represent a type of average of a set of data

22. circle graph :

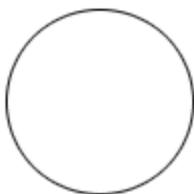
A graph used to compare the relationship of the parts to the whole

Example:



23. circumference :

The distance around a circle



$$C = \pi d$$

24. combination :

An arrangement of items or events in which order does not matter

Example:

Two-letter combinations of A, B, C, and D:

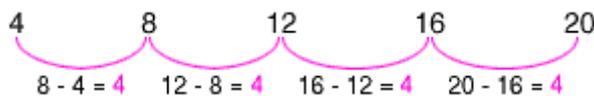
AB	BC	CD
AC	BD	
AD		

There are 6 combinations.

25. common difference :

The difference between any two successive terms in an arithmetic sequence

Example:



All of the differences are 4.

So, the common difference is 4.

26. common ratio :

The ratio used to multiply each term to produce the next term in a geometric sequence

Example:

100, 50, 25, 12.5, 6.25, ...

The common ratio for this sequence is $\frac{1}{2}$, or 0.5.



27. commutative property of addition :

The property which states that two or more addends can be added in any order without changing the sum

$$a + b = b + a$$

Examples:

$$c + 4 = 4 + c$$

$$(2 + 5) + 4r = 4r + (2 + 5)$$

28. commutative property of multiplication :

The property which states that two or more factors can be multiplied in any order without changing the product

$$a \cdot b = b \cdot a$$

Examples:

$$3 \cdot c = c \cdot 3$$

$$4 \cdot 5 \cdot y7 = 5 \cdot 4 \cdot y7$$

29. compatible numbers :

Numbers that are close to a dividend and divisor and divide evenly, with no remainder

Example:

$$1,545 \div 36$$

$$1,600 \div 40$$

4 is compatible with 16.

$$1,600 \div 40 = 40 \quad \text{Divide}$$

30. complement :

In probability, the complement of an event is all outcomes different from the favorable outcome. The sum of the probability of an event and its complement is 1.

Example:

The number cube is labeled 1-6.



Event: rolling a 2 $\rightarrow P(2) = \frac{1}{6}$

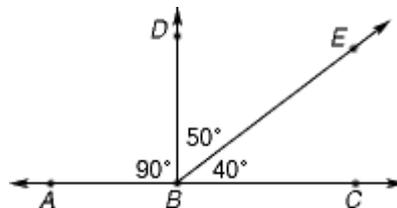
Complement: not rolling a 2 $\rightarrow P(\text{not } 2) = \frac{5}{6}$

$$P(2) + P(\text{not } 2) = \frac{1}{6} + \frac{5}{6} = 1$$

31. complementary angles :

Two angles whose measures have a sum of 90°

Example:



$\angle DBE$ and $\angle EBC$ are complementary.

32. composite number :

A whole number that has more than two whole-number factors

Examples:

4	Factors are 1, 2, and 4.
12	Factors are 1, 2, 3, 4, 6, and

	12.
25	Factors are 1, 5, and 25.

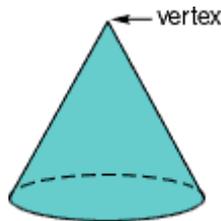
33. compound interest :

Interest earned on principal and previously earned interest

34. cone :

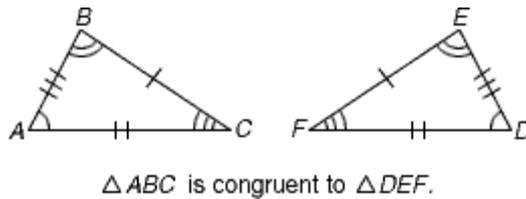
A solid figure with a circular base and one vertex

Example:



35. congruent : Having the same size and shape

Example:



36. constant :

A number that appears without a variable in an algebraic expression or equation

Example:

$$2x + 5 \qquad y = 7x - 8$$

↑
↑
 constant constant

37. converge :

To approach some fixed value

Example:

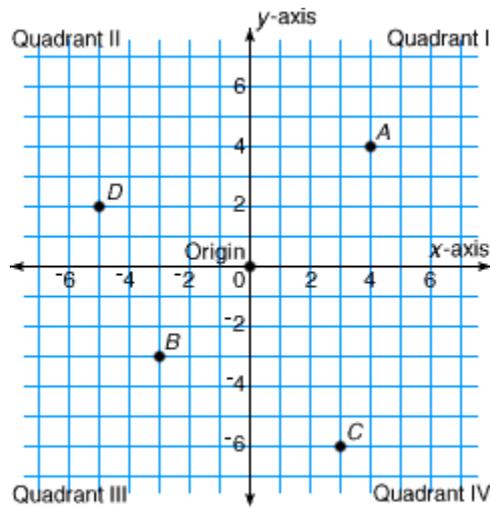
48, 24, 12, 6, 3, . . .

The sequence converges, shrinking toward 0.

38. coordinate plane :

A plane formed by two perpendicular number lines called axes; every point on the plane can be named by an ordered pair of numbers.

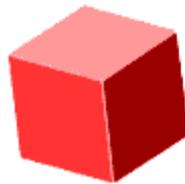
Example:



39. cube :

A rectangular prism with six congruent square faces

Example:



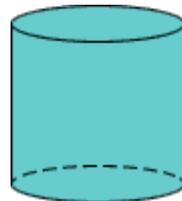
40. cubic function :

A function of the form $y = nx^3$ is a cubic function

41. cylinder :

A solid figure with two parallel, congruent circular bases connected by a curved surface

Example:



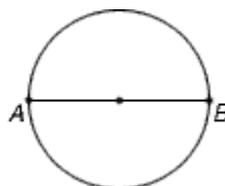
42. density property :

The property which states that between any two rational numbers, there is always another rational number

43. diameter :

A line segment that passes through the center of a circle, with endpoints on the circle

Example:



\overline{AB} is a diameter of the circle.

44. dilation :

A transformation that enlarges or reduces a figure

Example:



45. distributive property of multiplication over addition :

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

$$a(b + c) = a \times b + a \times c$$

Examples:

$$3(4 + 5) = 3 \times 4 + 3 \times 5$$

$$3(a + b) = 3a + 3b$$

46. diverge :

To get larger without bound

Example:

1, 2, 4, 8, 16, . . .

The pattern diverges.

47. domain :

The set of the first elements of a relation; see range

Example:

In the relation

$\{(2,20), (3,30), (4,40), (5,50)\}$,

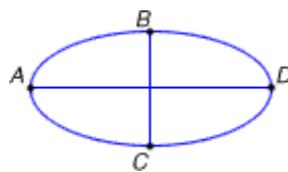
the domain is $\{2, 3, 4, 5\}$.

48. edge :

A connection between vertices in a network

Example:

The path from *A* to *B* is one edge of this network.



49. elements :

The words, numbers, or objects in a set

Example:

$\{1, 2, 3\}$

1, 2, and 3 are elements of the set.

50. equation :

A mathematical sentence that uses an equals sign to show that two quantities are equal

Examples:

$$10 = 3 + 7$$

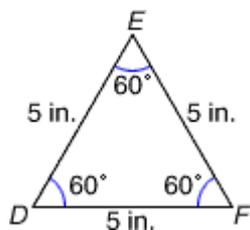
$$x = 3 + 7$$

$$y = x + 4$$

51. equiangular triangle :

A triangle with three congruent angles and three congruent sides

Example:

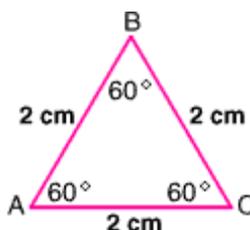


$\triangle DEF$ is equiangular.

52. equilateral triangle :

A triangle with three congruent sides and three congruent angles

Example:



53. equivalent :

Having the same value

Example:

The following expressions are equivalent:

$$5 - 1 \quad 3.5 + 0.5 \quad 4^2 - 12$$

54. equivalent fractions :

Fractions that name the same number

Example:

$$\frac{3}{4} = \frac{6}{8} = \frac{75}{100}$$

55. experimental probability :

The ratio of the number of times the event occurs to the total number of trials or times the activity is performed

$$\text{experimental probability} = \frac{\text{number of times event occurs}}{\text{total number of trials}}$$

56. exponent :

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

Example:

$$4^3 = 4 \times 4 \times 4$$

4 is the base; 3 is the exponent

57. expression :

A mathematical phrase that combines operations, numerals, and/or variables to name a number

Examples:

$$35 - 15.5 \quad 3^2 \cdot a$$

58. factor :

A number that is multiplied by another number to get a product

Example:

$2 \times 3 = 6$
2 and 3 are factors of 6.

59. Fibonacci Sequence:

The infinite sequence of numbers formed by adding two previous numbers to get the next number

Example:

1, 1, 2, 3, 5, 8, 13, 21, . . .

60. figurate number :

A number that can be represented by a geometric figure

Examples:



61. finance charge :

The interest charged when you pay a debt over time in payments

62. first quartile :

The median of the lower half of a set of data

Example:

2, 3, 4, 5, 5, 6, 7, 8, 8, 8, 9, 11



The first quartile is 4.5.

63. formula :

A rule that is expressed using symbols

Examples:

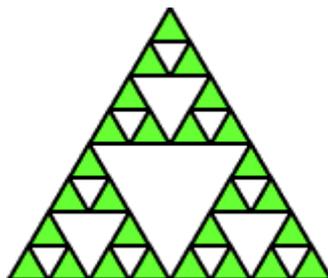
The area and the circumference of a circle can be computed by using the following formulas:

$$A = \pi r^2 \quad C = \pi d$$

64. fractal :

A structure with repeating patterns containing shapes that are like the whole but of different sizes throughout

Example:



65. frequency distribution table :

A table used to organize a collection of data

Example:

STUDENTS WHO READ GARFIELD			
Age Group	Tally	Frequency	Cumulative Frequency
7-10		7	7
11-14		7	14 ← 7 + 7
15-18		3	17 ← 14 + 3
19-22		3	20 ← 17 + 3

66. function : A relation in which each element in the domain is matched with only one element of the range

Example:

Function

$\{(1,5), (2,6), (3,7), (4,8)\}$

Not a Function

$\{(1,5), (1,6), (2,7), (3,8)\}$

1 is matched with 5 and 6.

67. fundamental counting principle :

The principle which states that all possible outcomes in a sample space can be found by multiplying the number of ways each event can occur

Example:

For dinner, Marsha can choose from 2 proteins (beef and fish), 4 vegetables (beans, broccoli, carrots, and corn), and 2 breads (rolls and biscuits). How many different protein-vegetable-bread selections can she make for dinner?

2 Proteins X 4 Vegetables X 2 Breads = 16

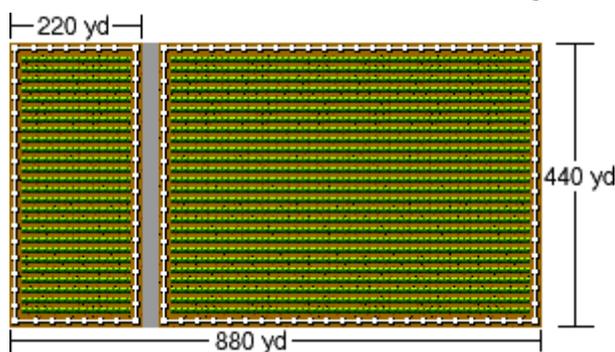
So, Marsha can choose from 16 selections.

68. geometric probability :

A probability calculated by comparing the area of a specific part to that of a total region

Example:

A farmer's cornfield is shown in the diagram below.



The probability that a lightning bolt that strikes will hit the left field is given by this ratio:

$$\frac{\text{area of left field}}{\text{total area of the farmer's field}}$$

$$\frac{220 \times 440}{880 \times 440} =$$

Compute the areas.

$$\frac{96,800}{387,200} =$$

$$96800 \div 387200 = \boxed{0.25}$$

Use a calculator to find the probability.

So, the probability is 25%, or $\frac{1}{4}$.

69. geometric sequence :

An ordered list of numbers that has a common ratio between consecutive terms.

Example:

2, 6, 18, 54, . . .

70. golden cut :

The division of a segment into parts in the ratio of approximately 1.61 to 1

Example:



71. golden ratio :

A ratio that is approximately equal to 1.61

72. golden rectangle :

Any rectangle with a length-to-width ratio of $\frac{1+\sqrt{5}}{2}$, or approximately 1.61 to 1

Example:



73. greatest common factor (GCF) :

The largest common factor of two or more given numbers

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.

74. greatest possible error (GPE) :

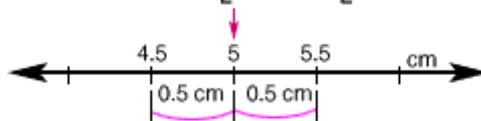
One half of the unit used in a measurement

Example:

recorded measurement: 5 cm

unit used: 1 cm

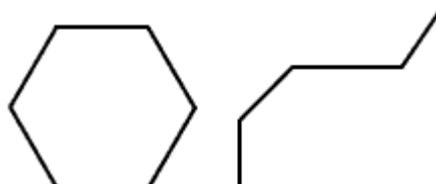
greatest possible error: $\frac{1}{2} \times 1 \text{ cm} = \frac{1}{2} \text{ cm}$, or 0.5 cm



75. hexagon :

A six-sided polygon

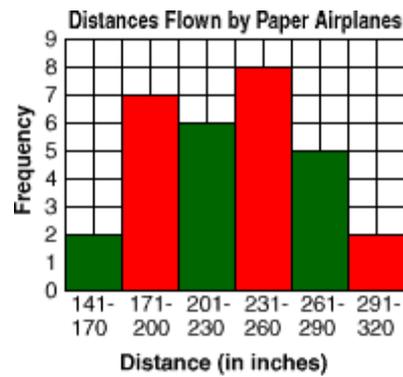
Examples:



76. histogram :

A bar graph that shows the frequency of data within equal intervals

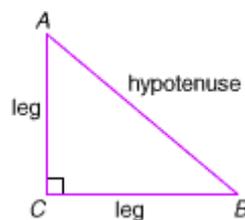
Example:



77. hypotenuse :

In a right triangle, the side opposite the right angle

Example:



78. identity property of one :

The property which states that multiplying a number by 1 does not change the number's value

Examples:

$$6 \times 1 = 6 \quad 1 \cdot a = a$$

79. identity property of zero :

The property which states that adding zero to a number does not change the number's value

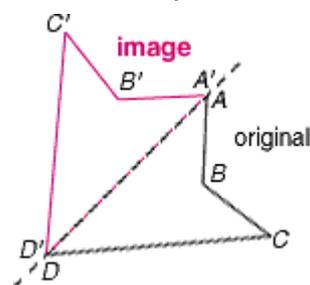
Examples:

$$3 + 0 = 3 \quad 0 + y = y$$

80. image :

The figure in a new position or location as the result of a transformation

Example:

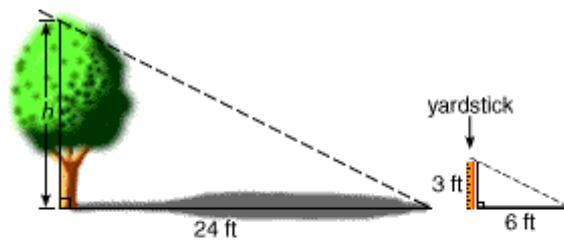


$A'B'C'D'$ is the image of $ABCD$.

81. indirect measurement :

A method of measuring distances by solving a proportion

Example:



$$\frac{3}{h} = \frac{6}{24} \quad \leftarrow \begin{array}{l} \text{small triangle} \\ \text{large triangle} \end{array} \quad \text{Write a proportion.}$$

$$6 \times h = 3 \times 24 \quad \text{Find the cross products.}$$

$$6h = 72 \quad \text{Solve the equation.}$$

$$\frac{6h}{6} = \frac{72}{6}$$

$$h = 12$$

So, the tree is 12 ft tall.

82. inequality :

A mathematical sentence that shows the relationship between quantities that are not equal, using $<$, $>$, \leq , \geq , or \neq

Examples:

$$6 < 9$$

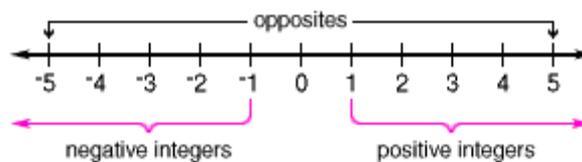
$$3x > 12$$

$$a \neq b$$

83. integers :

The set of whole numbers and their opposites

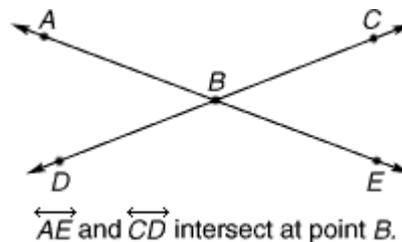
Example:



84. intersecting lines :

Lines that cross at exactly one point

Example:



85. inverse operations :

Operations that undo each other

Examples:

$$20 - 5 = 15 \text{ and } 15 + 5 = 20$$

$$20 \div 5 = 4 \text{ and } 4 \cdot 5 = 20$$

86. irrational number :

A number that cannot be expressed as a repeating or terminating decimal

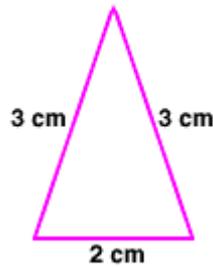
Example:

π and $\sqrt{5}$ are irrational numbers.

87. isosceles triangle :

A triangle with two congruent sides

Example:



88. iteration :

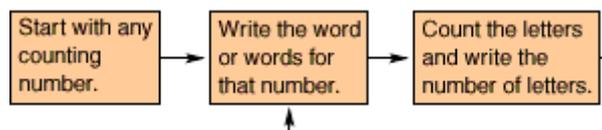
A step in the process of repeating something over and over again

89. iteration diagram :

A picture showing the steps of an iterating process

Example:

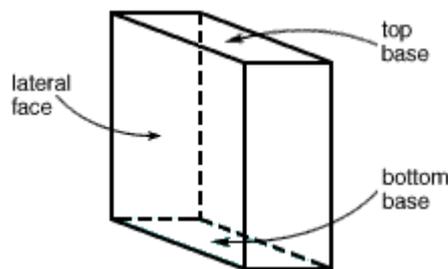
The following iteration diagram models the rules of a game.



90. lateral face :

In a prism or a pyramid, a face that is not a base

Example:

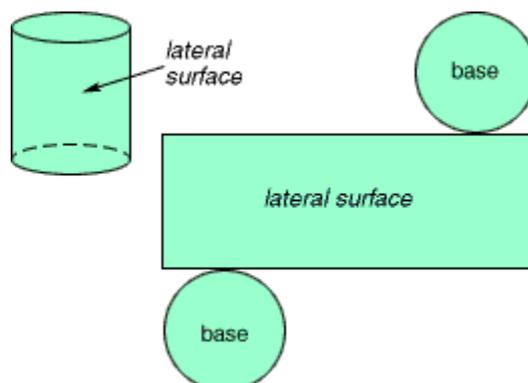


Rectangular Prism

91. lateral surface :

In a cylinder, the curved surface connecting the circular bases

Example:



92. least common denominator (LCD) :

The smallest number, other than zero, that is a multiple of two or more denominators

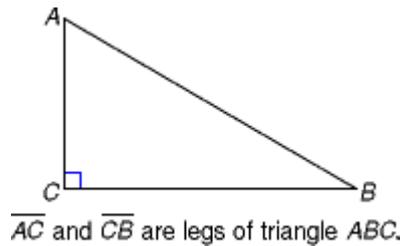
Example:

$$\begin{array}{l} \frac{1}{4} = \frac{3}{12} \\ \frac{5}{6} = \frac{10}{12} \end{array} \left. \begin{array}{l} \leftarrow \\ \leftarrow \end{array} \right\} \text{LCD for } \frac{1}{4} \text{ and } \frac{5}{6}$$

93. leg :

In a right triangle, either of the two sides that intersect to form the right angle; in an isosceles triangle, one of the two congruent sides

Example:



94. like terms :

Expressions that have the same variables and the same powers of the variables.

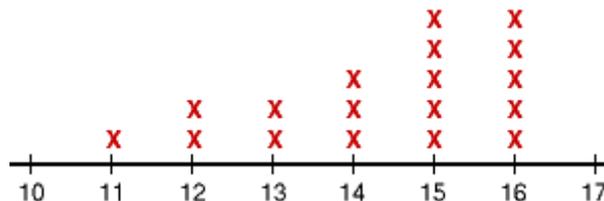
Example:

$8y$, $-4y$, and $9.1y$ are like terms.

95. line plot :

A number line with dots or other marks to show frequency

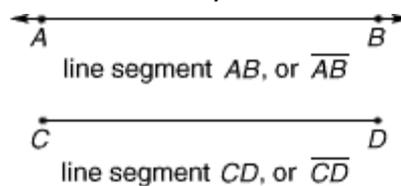
Example:



96. line segment :

A part of a line or ray, consisting of two endpoints and all points between those endpoints

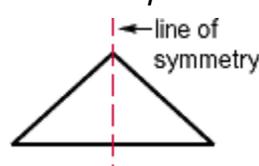
Examples:



97. line symmetry :

A figure has line symmetry if a line can separate the figure into two congruent parts.

Example:

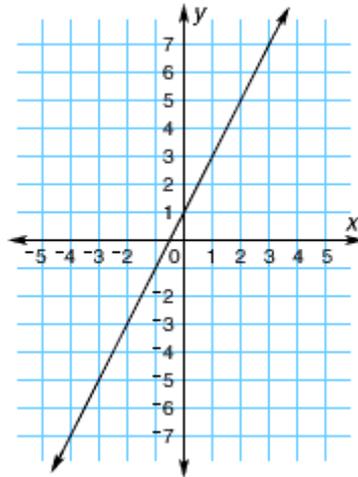


98. linear equation :

An equation that can be represented by a line on the coordinate plane

Example:

The linear equation for the graph below is $y = 2x + 1$

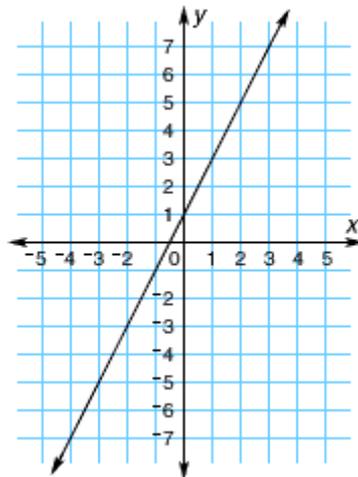


99. linear function :

A function whose graph is a straight line

Example:

$$y = 2x + 1$$



The function $y = 2x + 1$ is a linear function.

100. markup :

The difference between the retail price and the wholesale price

Example:



101. mathematical probability :

The ratio of the number of favorable outcomes to the number of all possible outcomes

Example:

$$P = \frac{\text{number of favorable outcomes}}{\text{number of possible outcomes}}$$

102. mean (average) :

The sum of a set of numbers divided by the number of addends

Example:

2, 3, 4, 5, 5, 6, 7, 8, 8, 8, 9, 13

The mean is 6.5

103. measure of central tendency :

A measure used to describe data; the mean, median, and mode are measures of central tendency.

104. median :

The middle number or the average of the two middle numbers in an ordered set of data

Example:

7.9, 8.0, 8.3, 8.3

The median is between 8.0 and 8.3

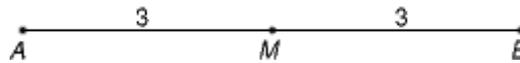
$$(8.0 + 8.3) \div 2 = 16.3 \div 2 = 8.15$$

The median is 8.15

105. midpoint :

The point that divides a line segment into two congruent line segments

Example:



M is the midpoint of \overline{AB}

106. monomial :

An expression that is a number, a variable, or the product of a number and one or more variables

Examples:

3x 7 5xy

107. multiplication property of zero :

The property which states that for all real numbers:

$$a \times 0 = 0 \text{ and } 0 \times a = 0$$

Example:

$$5 \times 0 = 0 \text{ and } 0 \times 5 = 0$$

108. multiplicative inverse :

The reciprocal of a number or variable

Example:

The multiplicative inverse of 2 is	1/2
	2
The multiplicative inverse of x is	1/x
	x

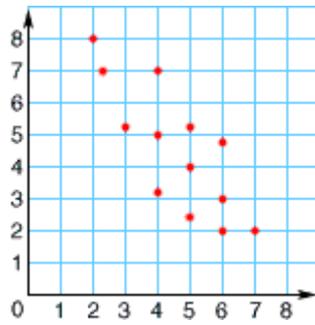
109. natural numbers :

The set of numbers {1, 2, 3, . . . } used for counting separate objects

110. negative correlation :

In a scatterplot, a pattern formed from data points shows the values of one variable increase as the values of the other variable decrease.

Example:



111. negative integer :

An integer less than zero

Example:

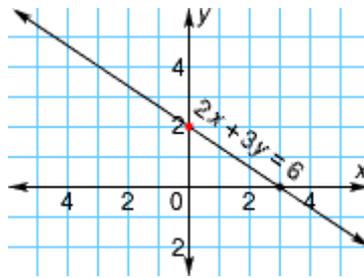
$-1, -2, -3, -4, \dots$

112. negative slope :

A line that slants downward from left to right has negative slope

Example:

$$2x + 3y = 6$$

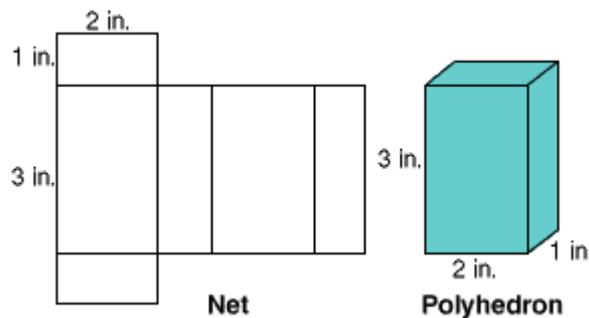


The graph of $2x + 3y = 6$ has negative slope.

113. net :

A connected arrangement of polygons in a plane that can be folded up to form a polyhedron

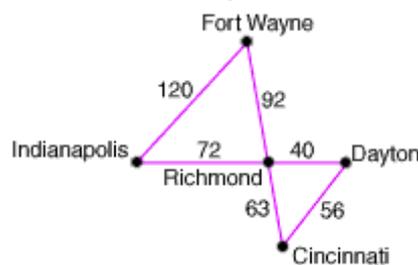
Example:



114. network :

A figure made up of vertices and edges that show how objects are connected

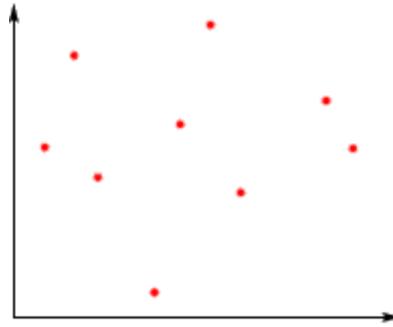
Example:



115. no correlation :

In a scatterplot, data points are scattered, and no pattern can be formed from the points

Example:



116. numerical expression :

A mathematical phrase that includes only numbers and operation symbols

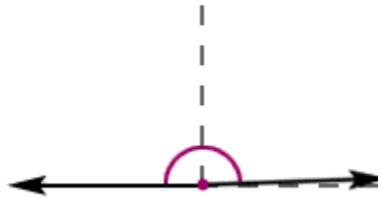
Examples:

$$60 + 25 \quad 42 \div 7 \quad 4^2 - 3$$

117. obtuse angle :

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

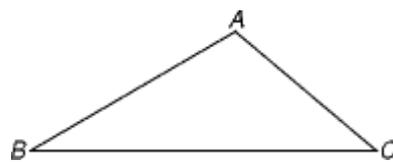
Example:



118. obtuse triangle :

A triangle containing exactly one obtuse angle

Example:

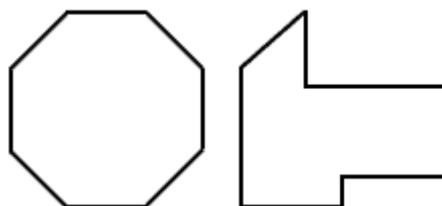


$\angle A$ is obtuse so $\triangle ABC$ is an obtuse triangle.

119. octagon :

An eight-sided polygon

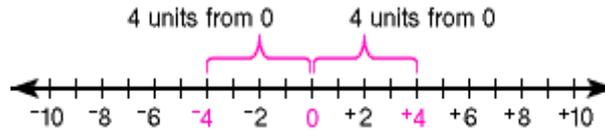
Examples:



120. opposites :

Two numbers that are represented by points on the number line that are the same distance from zero but are on opposite sides of zero

Example:



4 and -4 are opposites

121. order of operations :

The order in which the operations are done within an expression

1.	Operate inside parentheses.
2.	Multiply as indicated by exponents.
3.	Multiply and divide from left to right.
4.	Add and subtract from left to right.

Example:

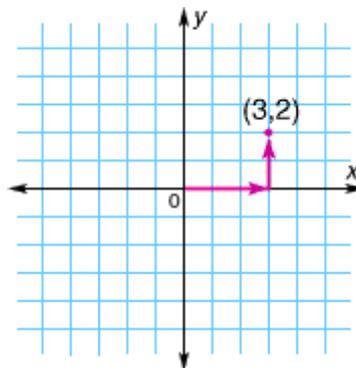
$10 \div (2 + 8) \times 2^3 - 4$	<i>Add inside parentheses. x</i>
$10 \div 10 \times 2^3 - 4$	<i>Clear exponent. x</i>
$10 \div 10 \times 8 - 4$	<i>Multiply and divide. x</i>
$8 - 4$	<i>Subtract.</i>
4	<i>.</i>

123.ordered pair :

A pair of numbers used to locate a point on a coordinate plane

Example:

(3,2) represents 3 spaces to the right of zero and 2 spaces up.

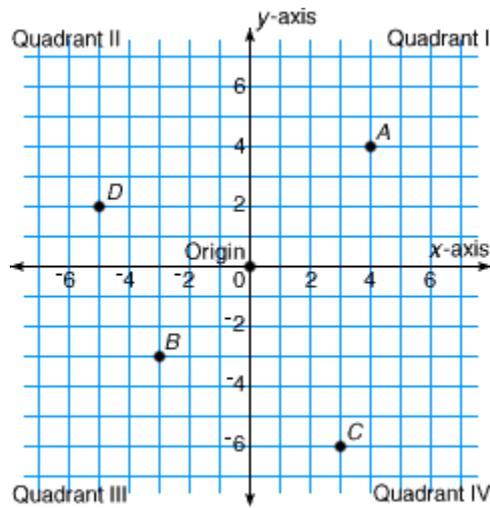


124. origin :

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

(0,0)

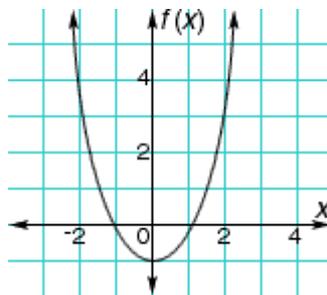
Example:



125. parabola :

A smooth U-shaped curve that opens upward or downward and is the graph of a quadratic function

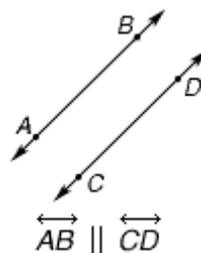
Example:



126. parallel lines :

Lines in a plane that do not intersect

Example:

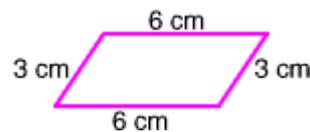


Read: Line *AB* is parallel to line *CD*.

127. parallelogram :

A quadrilateral whose opposite sides are parallel and congruent

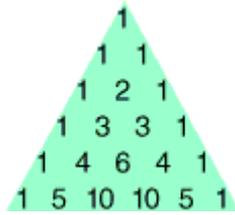
Example:



128. pascal's triangle :

A triangular arrangement of numbers in which each row starts and ends with 1, and each other number is the sum of the two numbers above it

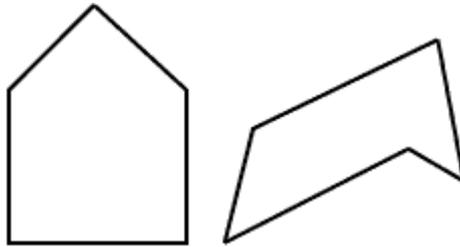
Example:



129. pentagon :

A five-sided polygon

Examples:



130. perfect square :

A number that has an integer as its square root

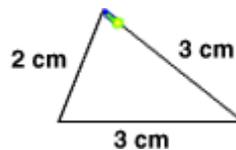
Example:

16 is a perfect square.

130. perimeter :

The distance around a polygon

Example:



$$3 \text{ cm} + 3 \text{ cm} + 2 \text{ cm} = 8 \text{ cm}$$

The perimeter of this figure is 8 centimeters.

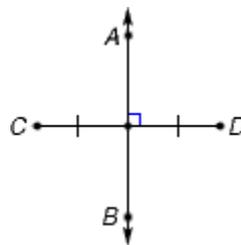
131. permutation :

An arrangement of items or events in which order is important

132. perpendicular bisector :

A line that intersects a line segment at its midpoint

Example:

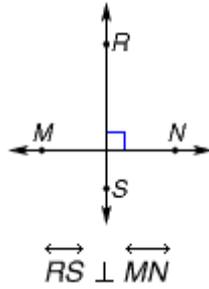


\overleftrightarrow{AB} is the perpendicular bisector of \overline{CD} .

133. perpendicular lines :

Lines that intersect to form 90° , or right angles

Example:



Read: Line RS is perpendicular to line MN .

134. pi :

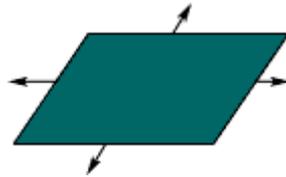
The ratio of the circumference of a circle to the length of its diameter;

$$\pi \approx 3.14 \text{ or } \frac{22}{7}$$

135. plane :

A set of points forming a flat surface that extends without end in all directions

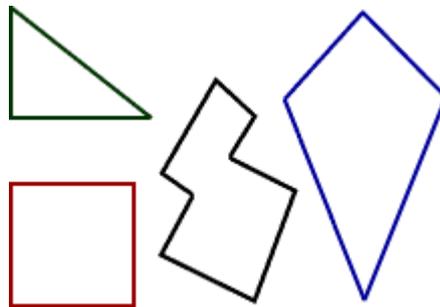
Example:



136. plane figure :

A figure which lies in a plane

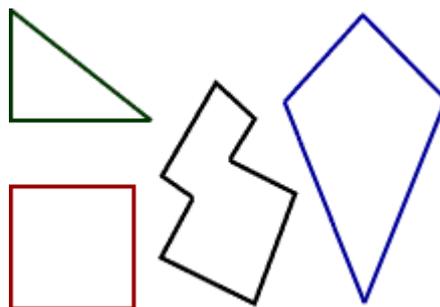
Examples:



137. polygon :

A closed plane figure formed by three or more line segments

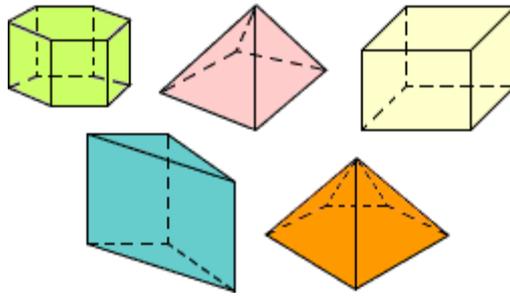
Examples:



138. polyhedron :

A solid figure with flat faces that are polygons

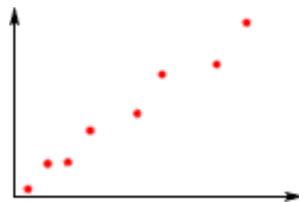
Examples:



139. positive correlation :

When values of two sets of data increase or decrease together

Example:

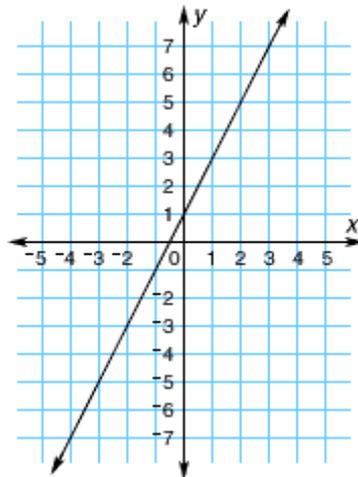


140. positive slope :

A line that slants upward from left to right has positive slope

Example:

$$y = 2x + 1$$



The graph of $y = 2x + 1$ has positive slope.

141. power :

The value of a number represented by a base and an exponent

Example:

$$4^3 = 4 \times 4 \times 4 = 64$$

142. precision :

A property of measurement that is related to the unit of measure used; the smaller the unit of measure used, the more precise the measurement is.

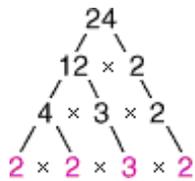
Example:

27 mm is more precise than 3 cm.

143. prime factorization :

A number written as the product of all its prime factors

Example:



$$24 = 2 \times 2 \times 2 \times 3 \text{ or } 2^3 \times 3$$

144. prime number :

A whole number greater than 1 that has exactly two factors, itself and 1

Examples:

2, 3, 5, 7, and 11 are prime numbers.

145. prism :

A polyhedron whose two bases are congruent, parallel polygons in parallel planes and whose lateral faces are parallelograms

Example:



rectangular prism

146. probability :

The number used to describe the chance of an event occurring

$$P = \frac{\text{favorable outcomes}}{\text{total outcomes}}$$

147. proportion :

An equation which states that two ratios are equivalent

Example:

$$\frac{5}{10} = \frac{1}{2}, \text{ or } 5:10 = 1:2$$

148. propotional :

Two ratios that are equivalent are proportional

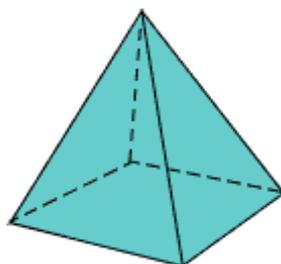
Example:

$$\frac{3}{4} = \frac{6}{8}$$

149. pyramid :

A polyhedron with one base that is a polygon and with lateral faces that are triangles which share a common vertex

Example:

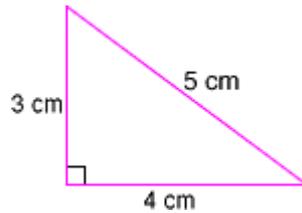


square pyramid

150. Pythagorean Theorem (Pythagorean Property) :

In any right triangle, if a and b are the lengths of the legs and c is the length of the hypotenuse, then $a^2 + b^2 = c^2$

Example:

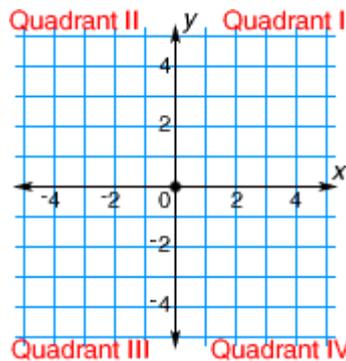


$a^2 + b^2 = c^2$	Replace the variables with the known lengths.
$3^2 + 4^2 = 5^2$	
$9 + 16 = 25$	
$25 = 25$	

151. quadrant :

One of the four regions of the coordinate plane

Example:



152. quadratic function :

A function of the form $y = nx^2$ is a quadratic function

153. quadrilateral :

A four-sided polygon

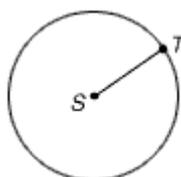
Examples:



154. radius :

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

Example:



\overline{ST} is the radius of the circle

155. range :

The difference between the greatest and the least numbers in a set of data

Example:

Month	Jun	Jul	Aug	Sep	Oct	Nov
Temperature	82°F	83°F	83°F	82°F	82°F	80°F

The greatest temperature is 83°F.

The least temperature is 80°F.

Since $83 - 80 = 3$, the range is 3°F.

156. rate :

A ratio that compares quantities of different units, such as miles per hour, price per pound, students per class

Example:

$$\text{rate: } \frac{\text{price}}{\text{number of ounces}} \rightarrow \frac{\$3.28}{20 \text{ oz}}$$

157. ratio :

A comparison of two numbers or quantities

Example:

3 to 5, or 3:5, or $\frac{3}{5}$

158. rational number :

Any number that can be expressed as a ratio $\frac{a}{b}$ where a and b are integers and $b \neq 0$

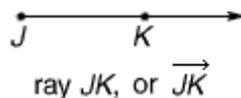
Examples:

0.5 $\frac{3}{5}$ -3 8 $3\frac{9}{10}$

159. ray:

A part of a line that has one endpoint and goes on forever in only one direction

Example:

**160. reciprocal :**

One of two numbers whose product is 1

Example:

$$\frac{2}{3} \times \frac{3}{2} = 1$$

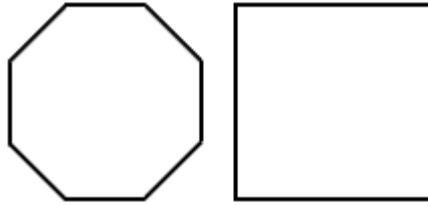
$\frac{3}{2}$ is the reciprocal of $\frac{2}{3}$.

$\frac{2}{3}$ is the reciprocal of $\frac{3}{2}$.

161. regular polygon :

A polygon in which all sides and all angles are congruent

Example:



162. relation :

A set of ordered pairs

Example:

(5,1) (10,2) (15,3) (20,4) (25,5)

163. repeating decimal :

A decimal in which one or more digits repeat endlessly

Examples:

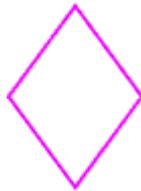
0.333 . . . , or $0.\overline{3}$

5.272727 . . . , or $5.\overline{27}$

164. rhombus :

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

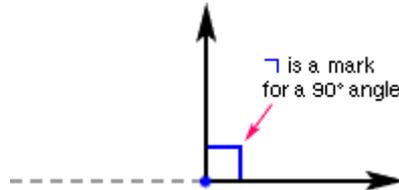
Example:



165. right angle :

An angle whose measure is 90°

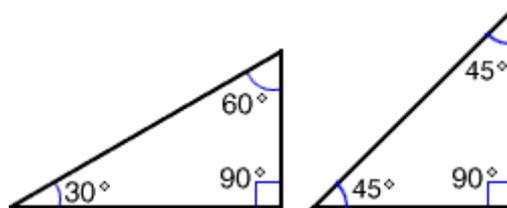
Example:



166. right triangle :

A triangle with exactly one right angle

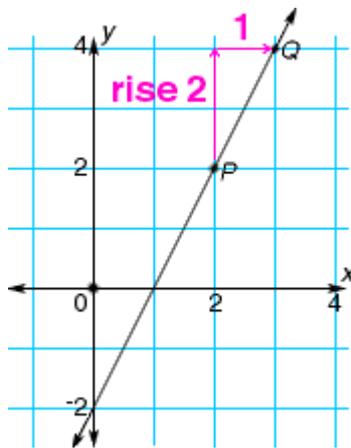
Examples:



167. rise :

The vertical change of a line

Example:

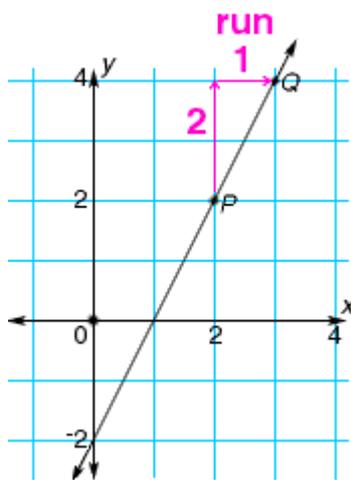


The rise of line PQ is 2.

168. run :

The horizontal change of a line

Example:



The run of line PQ is 1.

169. sample space :

All possible outcomes in a given situation

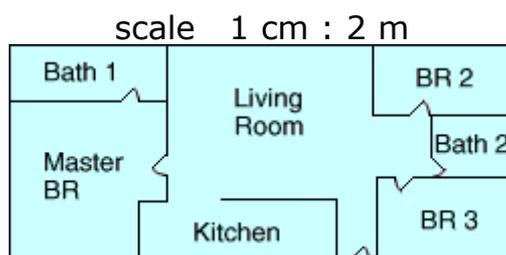
Example:

The sample space for tossing 2 coins is
 $(H,H), (H,T), (T,H), (T,T)$.

170. scale :

The ratio of the size of an object or the distance in a drawing to the actual size of the object or the actual distance

Example:



171. scale drawing :

A drawing that has its dimensions related by a scale factor to the dimensions of the object it represents

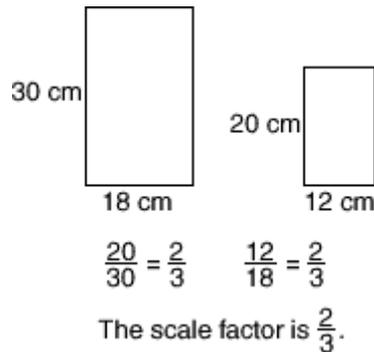
Example:



172. scale factor :

The common ratio for pairs of corresponding sides of similar figures

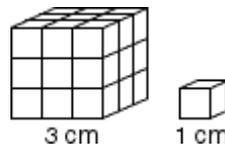
Example:



173. scale model :

A proportional model of a solid, or three-dimensional object

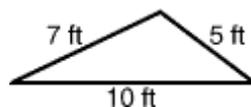
Example:



174. scalene triangle :

A triangle with no congruent sides

Example:



175. scatterplot :

A graph with points plotted that attempt to show a relationship between two variables

Example:



176. second quartile :

The median of a set of data

Example:

7.9, 8.0, 8.3, 8.3



The second quartile is between 8.0 and 8.3.

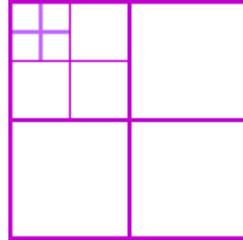
$$(8.0 + 8.3) \div 2 = 16.3 \div 2 = 8.15$$

The second quartile is 8.15.

177. self-similarity :

A figure has self-similarity if it contains a repeating pattern of smaller and smaller parts that are like the whole, but different in size

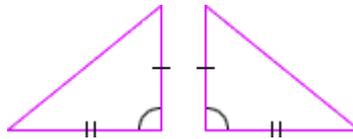
Example:



178. side-angle-side (SAS) :

A triangle congruence rule stating that two sides and the included angle of one triangle match two sides and the included angle of another triangle

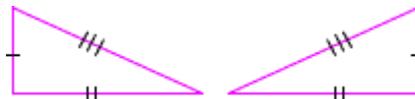
Example:



179. side-side-side (SSS) :

A triangle congruence rule stating that three sides of one triangle match three sides of another

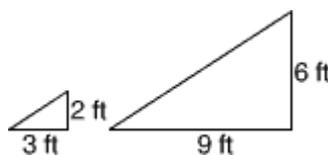
Example:



180. similar figures :

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

Example:



181. simple interest :

The amount obtained by multiplying the principal by the rate by the time; $I = prt$

Example:

Carol invested \$150 at a simple interest rate of 4%. Find the interest she will earn in 1 year.

I	4% = 0.04	<i>Write interest rate as a decimal.</i>
I $= prt$ $= 150 \times 0.04 \times$ 1 $= 6$		<i>Multiply interest rate by principal by time.</i>

So, the interest earned in 1 year is \$6.

182. simplest form :

The result of combining like terms in an expression

Example:

$$4x + 3x + 2 = 7x + 2$$

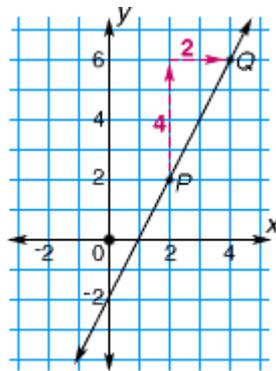
183. simulation :

A model of an experiment that would be too difficult or too time-consuming to actually perform

184. slope :

The measure of the steepness of a line; the ratio of vertical change (rise) to horizontal change (run)

Example:

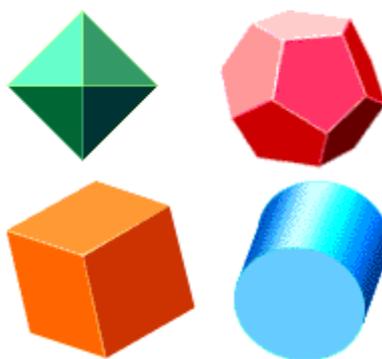


The slope of line PQ is $\frac{4}{2}$, or 2.

185. solid figure :

A three-dimensional figure

Examples:



186. solution :

The value that makes two sides of an equation equal

Example:

$x + 7 = 9$
$2 + 7 = 9$
2 is the

solution.

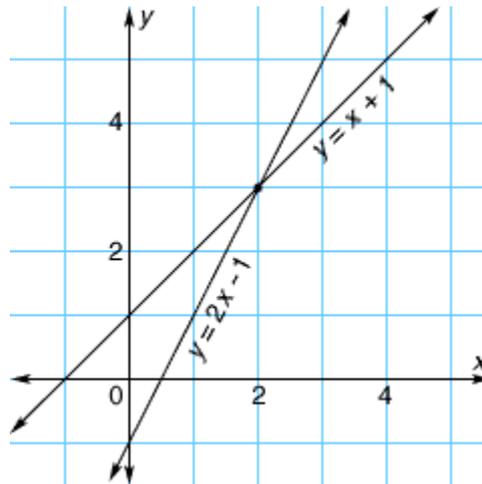
187. solution of the system :

The values for the variables that make each of the equations in a system of equations true; the coordinates of the point where the graphs of the equations in the system intersect

Example:

$$y = 2x - 1$$

$$y = x + 1$$

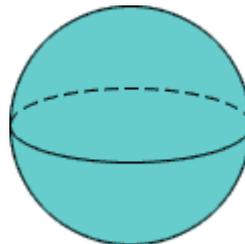


The solution of the system is (2,3).

188. sphere :

A solid figure with all points the same distance from the center

Example:



189. spreadsheet :

A computer program that organizes information in rows and columns and does calculations with numbers and formulas

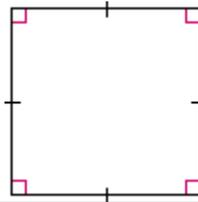
Example:

	A	B	C	D	E
1	Month	Interest (1.5%)	Balance	Payment	New Balance
2	January	\$0	\$100.00	\$20.00	\$80.00
3	February	\$1.20	\$81.20	\$20.00	\$61.20
4	March	\$0.92	\$62.12	\$20.00	\$42.12
5	April	\$0.64	\$42.76	\$20.00	\$22.76
6	May	\$0.35	\$23.11	\$20.00	\$3.11
7	June	\$0.05	\$3.16	\$3.16	\$0
8	Total	\$3.16		\$103.16	

190. square :

A rectangle with 4 congruent sides

Example:



The product of a number and itself

Example:

25 is the square of 5 because

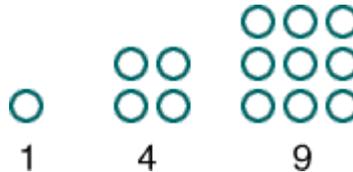
$$5 \times 5 = 25.$$

$$5 \times 5 = 5^2 \leftarrow \text{Read as 5 squared.}$$

191. square number :

A number that can be represented with a square array

Examples:



192. square root :

One of the two equal factors of a number

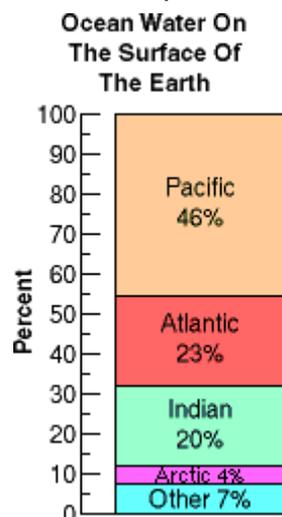
Example:

6 is the square root of 36 since $6^2 = 6 \times 6 = 36$

193. stacked bar graph :

A graph used to compare the parts to the whole

Example:



194. stem-and-leaf plot :

A method of organizing intervals or groups

Example:

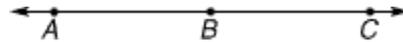
Set of Data
140, 130, 136, 158, 152, 167

Stem	Leaves
13	0 6
14	0
15	2 8
16	7

195. straight angle :

An angle whose measure is 180°

Example:



$\angle ABC$ is a straight angle.

196. stratified sample :

A sample of a population that has been divided into subgroups

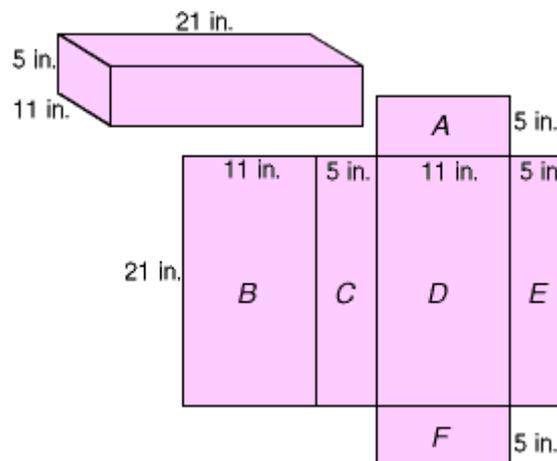
Example:

Stratified Sample	
Boys	Girls
Phillip	Heather
Priestlin	Katey
Thai	Laticia

197. surface area :

The sum of the areas of all the faces, or surfaces, of a solid figure

Example:



- Area of face $A = 11 \times 5 = 55$
- Area of face $B = 21 \times 11 = 231$
- Area of face $C = 21 \times 5 = 105$
- Area of face $D = 21 \times 11 = 231$
- Area of face $E = 21 \times 5 = 105$
- Area of face $F = 11 \times 5 = 55$

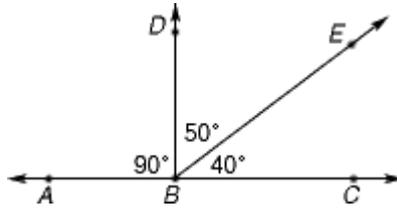
$$55 + 231 + 105 + 231 + 105 + 55 = 782$$

So, the surface area is 782 in.^2

198. supplementary angles :

Two angles whose sum equals 180°

Example:



$\angle ABD$ and $\angle DBC$ are supplementary.

199. systematic sample :

A sample of a population that has been selected using a pattern

Example:

Systematic Sample	
23d: Bill	53d: Chelsea
33d: Joyce	63d: Mary
43d: Atkin	73d: Brad

200. system of equations :

Two or more equations that involve two or more variables

Example:

$$y = 2x - 1$$

$$y = x + 1$$

201. term :

The parts of an expression that are separated by the + or - symbols

Example:

$$2x + 6$$

The terms are $2x$ and 6 .

An element or number in a sequence

Example:

$$3, 6, 12, 24, \dots$$

6 is a term in the sequence.

202. terminating decimal :

A decimal that ends; a decimal for which the division operation results in a remainder of zero

Examples:

203. third quartile :

The median of the upper half of a set of data

Example:

2, 3, 4, 5, 5, 6, 7, 8, 8, 8, 9, 11

The third quartile is 8.

204. transformation :

A change in size, shape, or position of a geometric figure; translations, reflections, rotations, and dilations are transformations.

Example:



205. trapezoid :

A quadrilateral with only one pair of parallel sides

Example:



206. tree diagram :

A branching diagram which shows all the possible combinations or outcomes

Example:

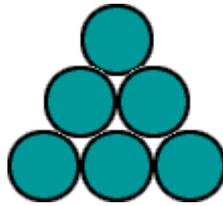


207. triangular numbers :

A sequence of numbers, 1, 3, 6, 10, 15, . . . , that can be shown geometrically with triangular arrays

Example:

6 is a triangular number.



208. unit price :

A unit rate used to compare prices

Examples:

$$\frac{\$2.24}{64 \text{ oz}} = \frac{\$0.035}{1 \text{ oz}} \leftarrow \text{unit price}$$

$$\frac{\$0.79}{20 \text{ oz}} = \frac{\$0.0395}{1 \text{ oz}} \leftarrow \text{unit price}$$

209. variable :

A letter used to represent one or more numbers in an expression, equation, or inequality

Examples:

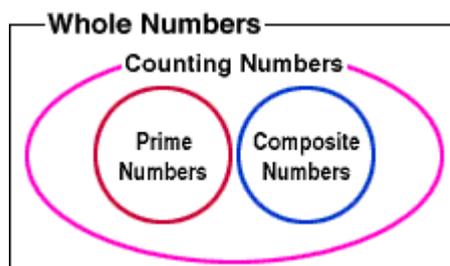
$$5a; \quad 2x = 8; \quad 3y + 4 \neq 10$$

a, x, and y are variables

210. venn diagram :

A diagram that is used to show relationships between sets

Example:



211. vertex :

The point where two or more rays meet; the point of intersection of two sides of a polygon; the point of intersection of three or more edges of a solid figure; the top point of a cone or pyramid; in a network, a point that represents an object

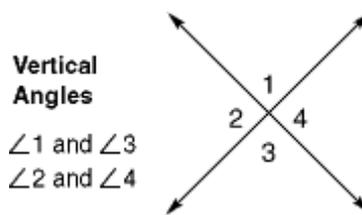
Examples:



212. vertical angles :

A pair of opposite congruent angles formed by intersecting lines

Example:



213. vertical line test :

A test to determine whether or not a relation is a function

Example:

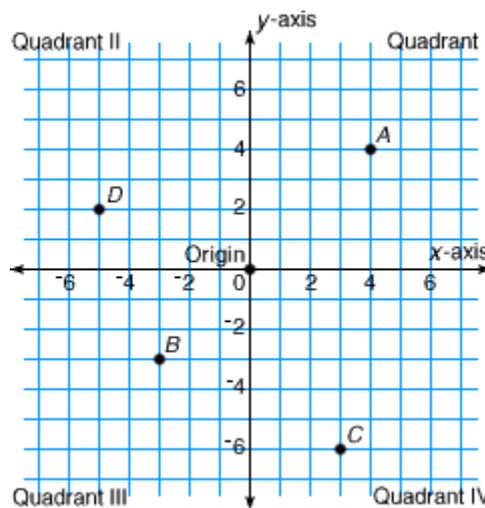
If a vertical line crosses two or more points on the graph, the relation is not a function.

Every vertical line like the blue vertical line crosses only one point on the graph, so this relation is a function .	There is at least one vertical line like the blue vertical line that crosses two points on the graph, so this relation is not a function .
--	---

214. x-axis :

The horizontal axis on the coordinate plane

Example:



215. x-coordinate :

The first number in an ordered pair; tells whether to move right or left along the x-axis of the coordinate plane

Example:

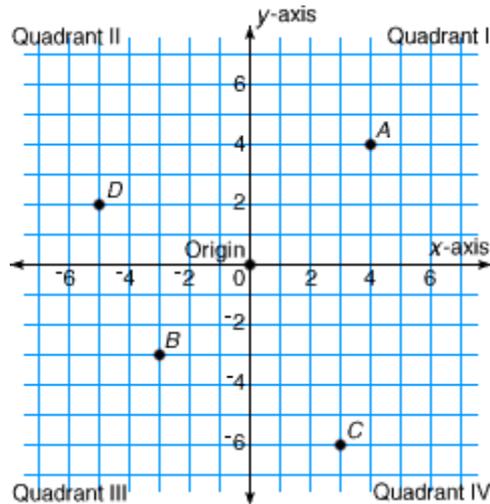
(3, 2)

3 is the x-coordinate.

216. y-axis :

The vertical axis on the coordinate plane

Example:



217. y-coordinate :

The second number in an ordered pair; tells whether to move up or down along the y-axis of the coordinate plane

Example:

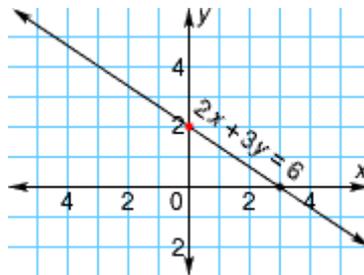
(3, 2)

2 is the y-coordinate.

218. y-intercept :

The y-coordinate of the point where the graph of a line crosses the y-axis

Example:



The y-intercept of $2x + 3y = 6$ is 2.