

8th Grade

Vocabulary Cards and Word Walls

Revised: January 15, 2016

Important Notes for Teachers:

- The vocabulary cards in this file match the Common Core, the math curriculum adopted by the Utah State Board of Education, August 2010.
- The cards are arranged alphabetically.
- Each card has three sections.
 - Section 1 is only the word. This is to be used as a visual aid in spelling and pronunciation. It is also used when students are writing their own “kid-friendly” definition and drawing their own graphic.
 - Section 2 has the word and a graphic. This graphic is available to be used as a model by the teacher.
 - Section 3 has the word, a graphic, and a definition. This is to be used for the Word Wall in the classroom. For more information on using a Word Wall for Daily Review – see “Vocabulary – Word Wall Ideas” on this website.
- These cards are designed to help all students with math content vocabulary, including ELL, Gifted and Talented, Special Education, and Regular Education students.

For possible additions or corrections to the vocabulary cards, please contact the Granite School District Math Department at 385-646-4239.

Bibliography of Definition Sources:

Algebra to Go, Great Source, 2000. ISBN 0-669-46151-8

Math on Call, Great Source, 2004. ISBN-13: 978-0-669-50819-2

Math at Hand, Great Source, 1999. ISBN 0-669-46922

Math to Know, Great Source, 2000. ISBN 0-669-47153-4

Illustrated Dictionary of Math, Usborne Publishing Ltd., 2003. ISBN 0-7945-0662-3

Math Dictionary, Eula Ewing Monroe, Boyds Mills Press, 2006. ISBN-13: 978-1-59078-413-6

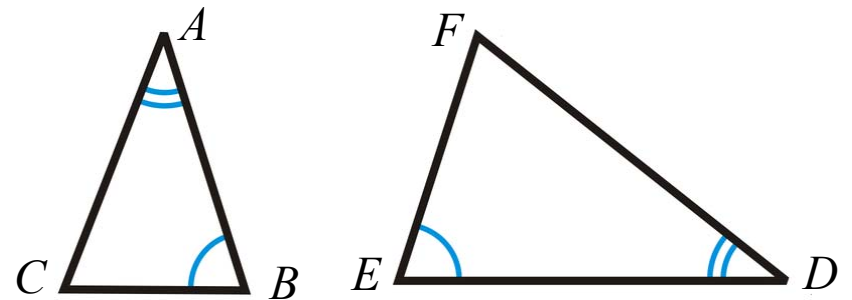
Student Reference Books, Everyday Mathematics, 2007.

Houghton-Mifflin eGlossary, <http://www.eduplace.com>

Interactive Math Dictionary, <http://www.amathsdictionaryforkids.com/>

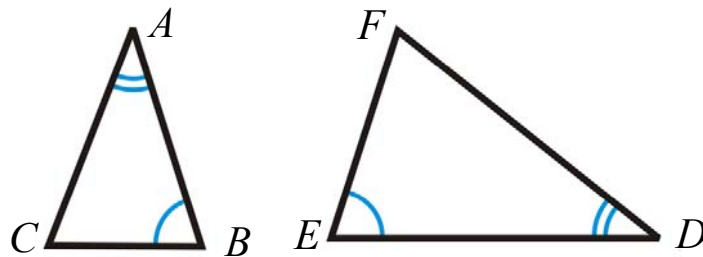
AA Similarity Postulate

AA Similarity Postulate



$$\triangle ABC \sim \triangle DEF$$

AA Similarity Postulate



$$\triangle ABC \sim \triangle DEF$$

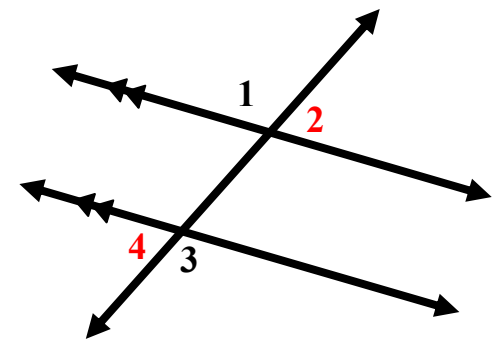
If two angles of one triangle are congruent to two angles of another triangle, then the triangles are similar.

Alternate Exterior Angles

Alternate Exterior Angles

Alternate Exterior Angles

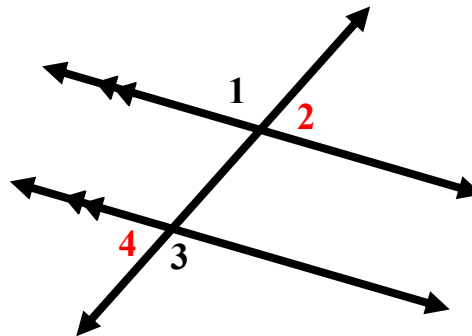
$\angle 1 \& \angle 3$, $\angle 2 \& \angle 4$



Alternate Exterior Angles

Alternate Exterior Angles

$\angle 1 \& \angle 3$, $\angle 2 \& \angle 4$



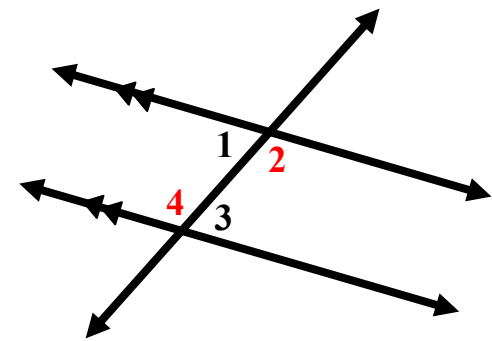
When two lines are cut by a transversal, the pairs of angles on opposite sides of the transversal, but outside the two lines are called Alternate Exterior Angles.

Alternate Interior Angles

Alternate Interior Angles

Alternate Interior Angles

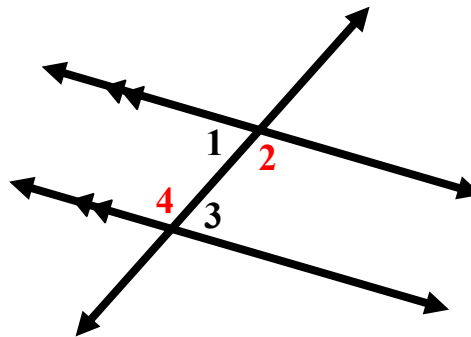
$\angle 1 \& \angle 3, \angle 2 \& \angle 4$



Alternate Interior Angles

Alternate Interior Angles

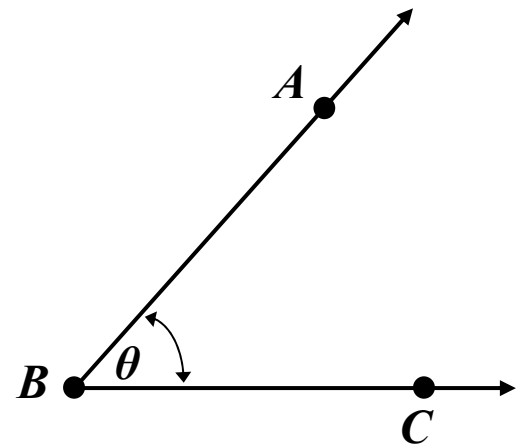
$\angle 1 \& \angle 3, \angle 2 \& \angle 4$



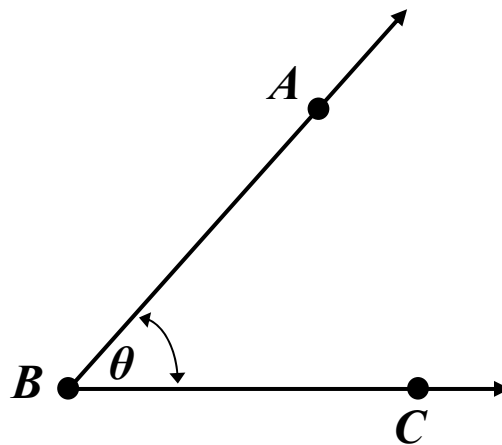
When two lines are cut by transversal, the pairs of angles on opposite sides of the transversal, but inside the two lines are called Alternate Interior Angles.

angle

angle



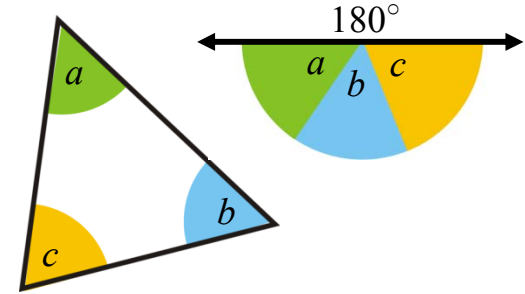
angle



The union of two rays
that have the same
endpoint.

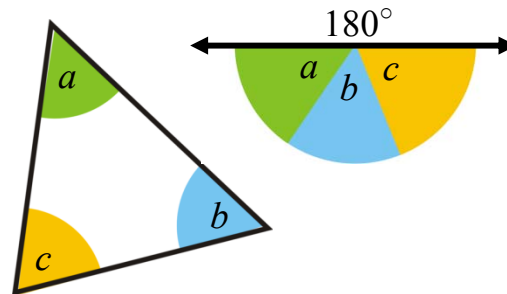
Angle Sum Theorem

Angle Sum Theorem



$$\angle a + \angle b + \angle c = 180^\circ$$

Angle Sum Theorem

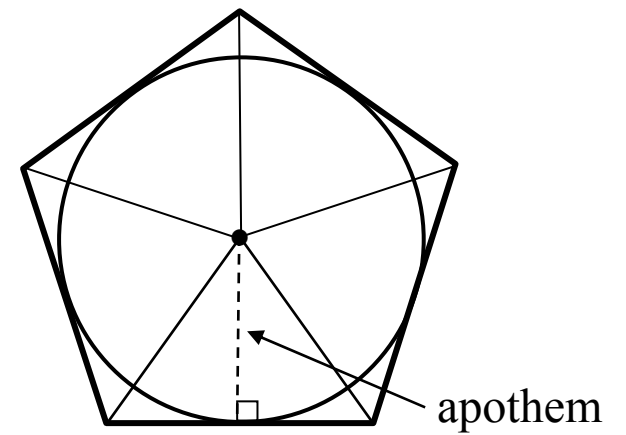


$$\angle a + \angle b + \angle c = 180^\circ$$

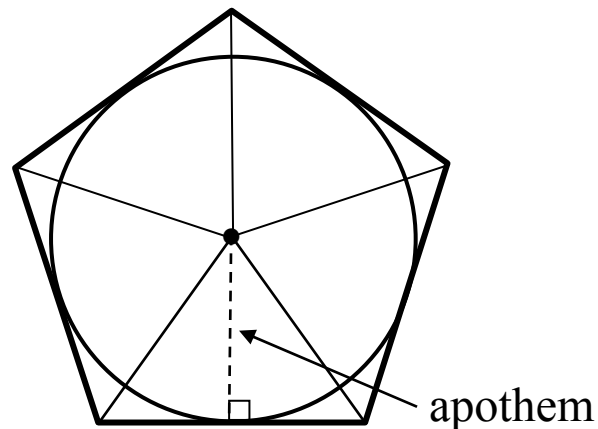
The sum of the measures of the interior angles of a triangle is 180° .

apothem

apothem



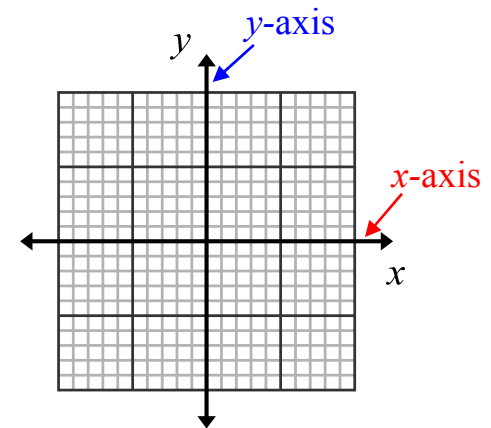
apothem



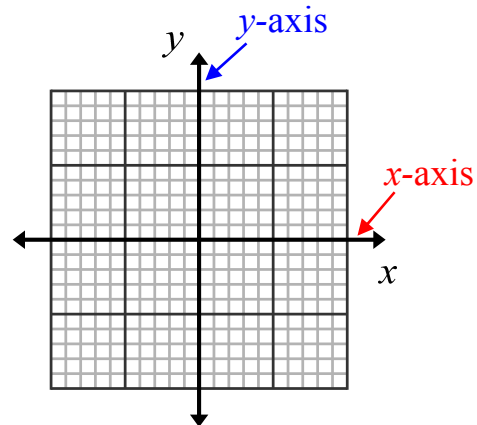
A segment, or the length of a segment, whose endpoints are the center of the polygon and the midpoint of a side.

axis

axis



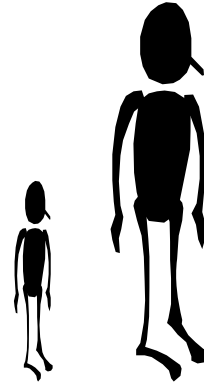
axis



A reference line from which distances or angles are measured in a coordinate grid.
(plural – axes)

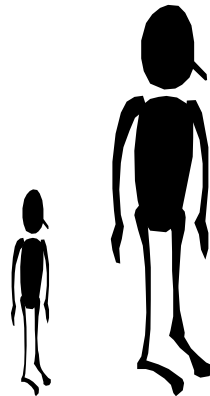
bivariate data

bivariate
data



<i>Height (inches)</i>	<i>Weight (pounds)</i>
67	155
72	220
77	240
74	195
69	175

bivariate
data

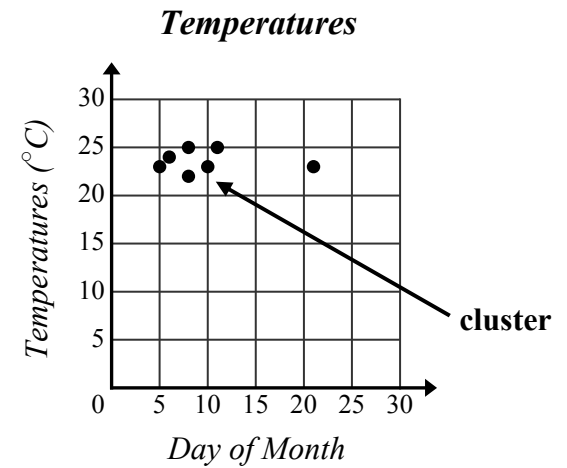


<i>Height (inches)</i>	<i>Weight (pounds)</i>
67	155
72	220
77	240
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69	175

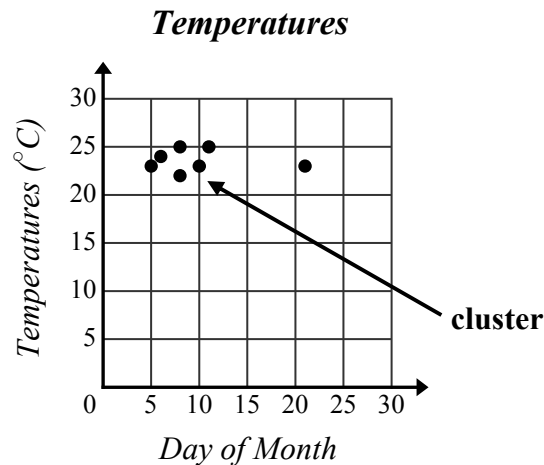
A set of data that
show the relationship
between two
variables.

cluster

cluster



cluster



A group of the same or similar elements gathered or occurring closely together on a graph.

coefficient

coefficient

$5x$
coefficient



coefficient

$5x$
coefficient



A numerical factor in a term of an algebraic expression.

collecting like terms

collecting like terms

like terms

$$5x - 12 - 3x$$

simplified expression

$$2x - 12$$

collecting like terms

like terms

$$5x - 12 - 3x$$

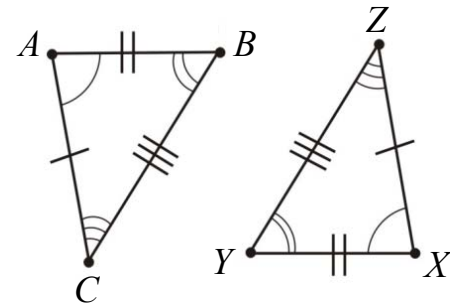
simplified expression

$$2x - 12$$

A mathematical process used to simplify an expression or to add or subtract polynomials.

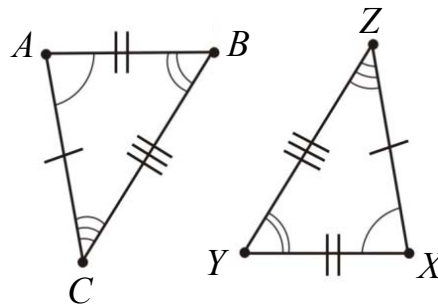
congruent

congruent



$$\triangle ABC \cong \triangle XYZ$$

congruent

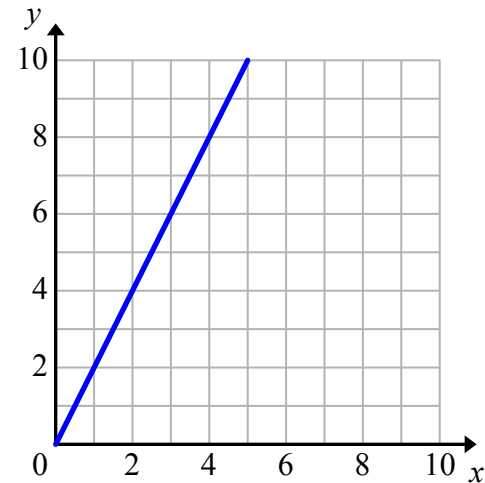


$$\triangle ABC \cong \triangle XYZ$$

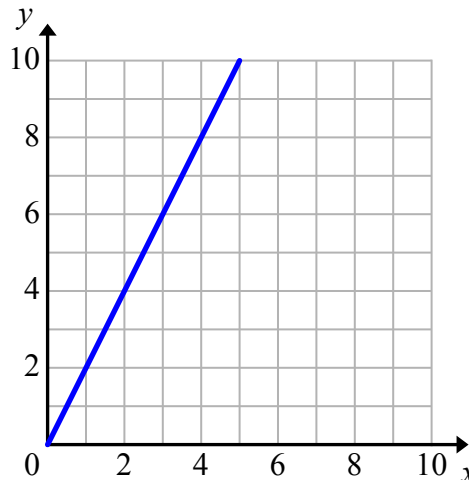
Two figures are congruent if they have the same shape and size.

constant rate of change

constant rate
of change



constant
rate
of change



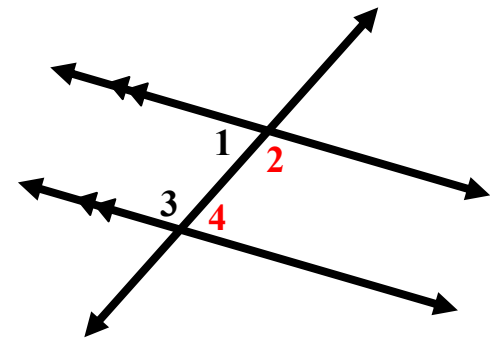
Constant rate of change is illustrated as the slope of the graph of the equation. This is so because for every equal interval y changes, x changes by an equal interval for any two points on the line.

Consecutive Interior Angles

Consecutive Interior Angles

Consecutive Interior Angles

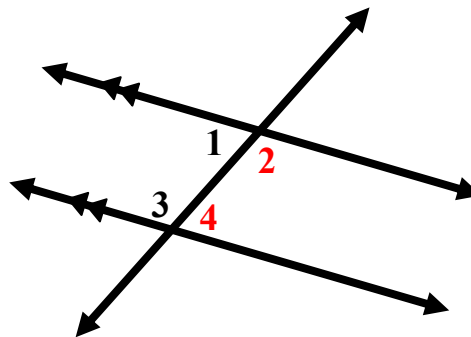
$\angle 1 \& \angle 3, \angle 2 \& \angle 4$



Consecutive Interior Angles

Consecutive Interior Angles

$\angle 1 \& \angle 3, \angle 2 \& \angle 4$



When two lines are cut by a transversal, the pairs of angles on one side of the transversal, but inside the two lines are called Consecutive Interior Angles.

converse

converse

Statement: If two angles are congruent, then they have the same measure.

Converse: If two angles have the same measure, then they are congruent.

converse

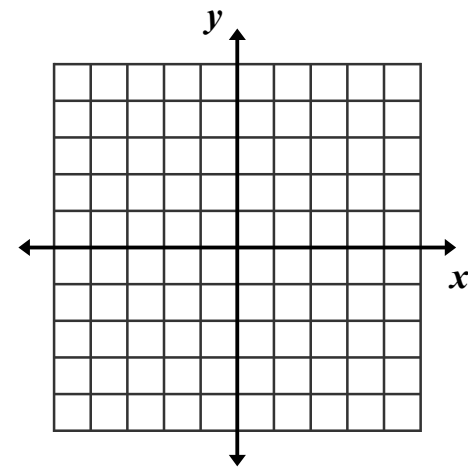
Statement: If two angles are congruent, then they have the same measure.

Converse: If two angles have the same measure, then they are congruent.

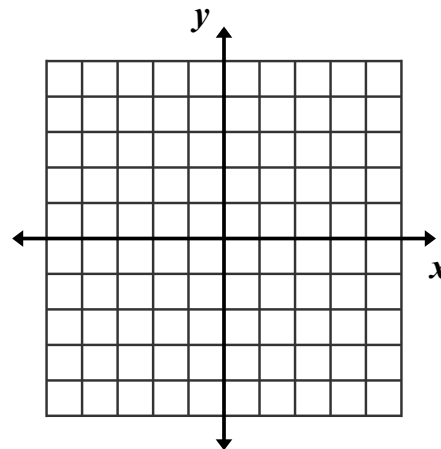
Switching the hypothesis and conclusion of a conditional statement.

coordinate plane

coordinate
plane



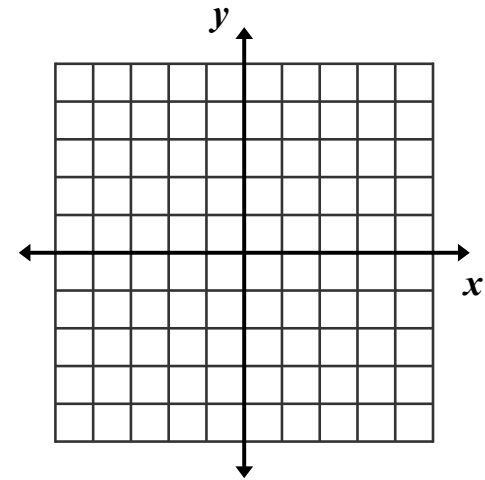
coordinate
plane



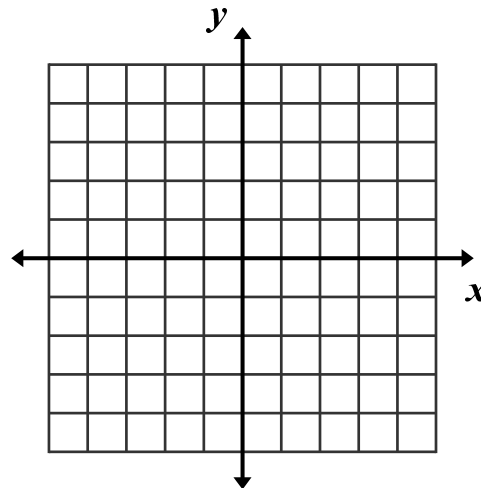
A 2-dimensional system in which the coordinates of a point are its distances from two intersecting, usually perpendicular, straight lines called axes. (also called coordinate grid or coordinate system)

coordinate system

coordinate system



coordinate system



A 2-dimensional system in which the coordinates of a point are its distances from two intersecting, usually perpendicular, straight lines called axes.
(also called coordinate plane or coordinate grid)

coordinates

coordinates

(3, -5)
(x , y)

coordinates

(3, -5)
(x , y)

An ordered pair of numbers that identify a point on a coordinate plane.

cube root

cube root

$$b^3 = 64$$

$$b = \sqrt[3]{64}$$

$$b = 4$$

cube
root

$$b^3 = 64$$

$$b = \sqrt[3]{64}$$

$$b = 4$$

For any real numbers a and b , if $a^3 = b$, then a is a cube root of b or $\sqrt[3]{b} = a$.

decimal

decimal

\$29.45

53.0

0.02

decimal

\$29.45

53.0

0.02

A number with one or more digits to the right of a decimal point. *Decimal* is used as another name for decimal fraction.

decimal expansion

decimal
expansion

$$25^2 = 625$$

$$\pi = 3.14159\dots$$

$$\frac{1}{9} = 0.1111\dots$$

decimal
expansion

$$25^2 = 625$$

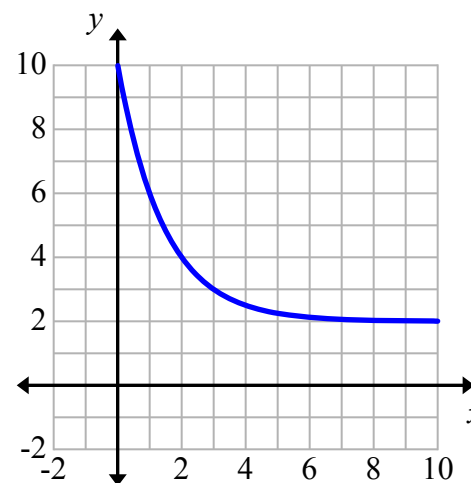
$$\pi = 3.14159\dots$$

$$\frac{1}{9} = 0.1111\dots$$

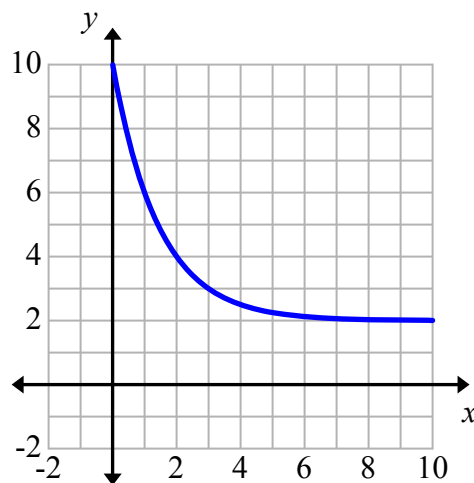
The decimal expansion of a number is its representation in base-10 (i.e., the decimal system).

decreasing function

decreasing
function



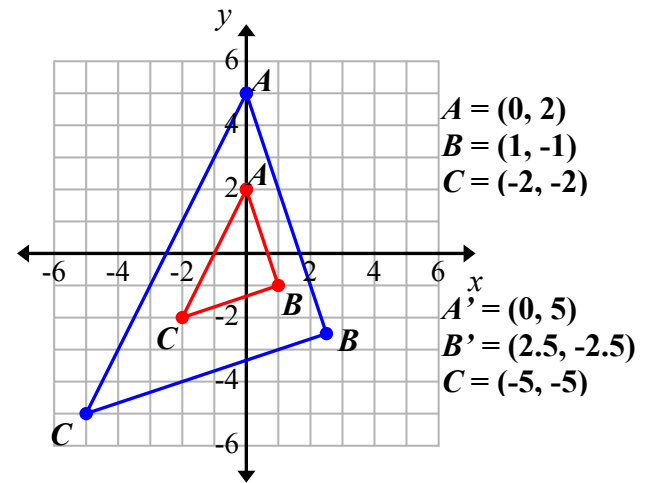
decreasing
function



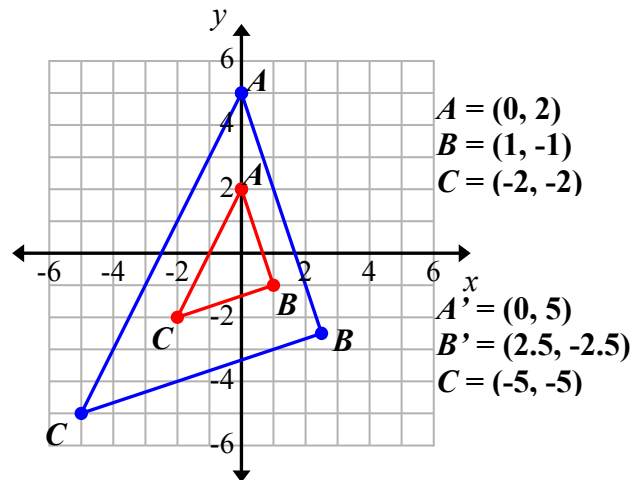
A function whose y -value decreases as the x -value increases.

dilation

dilation



dilation



A transformation that moves each point along the ray through the point, starting from a fixed center, and multiplies distances from the center by a common scale factor. If a vertex of a figure is the center of dilation, then the vertex and its image after the dilation are the same point.

Distributive Property

Distributive Property

Example:

$$5(6 + 8) = (5 \times 6) + (5 \times 8)$$

Distributive Property

Example:

$$5(6 + 8) = (5 \times 6) + (5 \times 8)$$

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

and

$$a \times (b - c) = (a \times b) - (a \times c),$$

where a , b , and c stand for any real numbers.

equation

equation

$$9x - 8 = 22 - x$$

equation

$$9x - 8 = 22 - x$$

A statement that the values of two mathematical expressions are equal (indicated by the sign =).

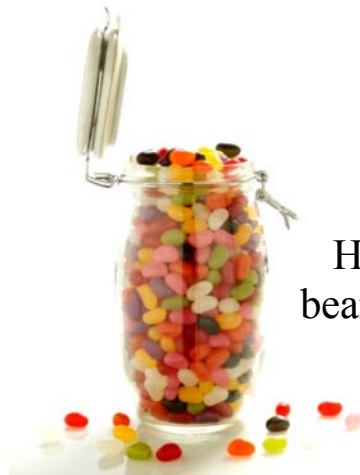
estimate

estimate



How many jelly beans are in the jar?

estimate



How many jelly beans are in the jar?

To find a number close to an exact amount; an estimate tells *about* how much or *about* how many.

expression

expression

$$5x + 3$$

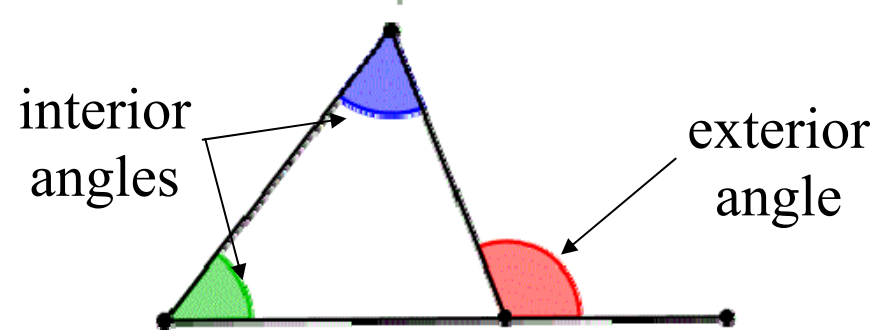
expression

$$5x + 3$$

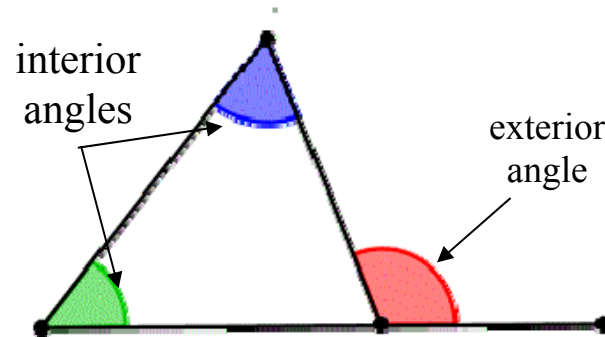
A variable or combination of variables, numbers, and symbols that represents a mathematical relationship.

Exterior Angle Theorem

Exterior Angle Theorem



Exterior Angle Theorem

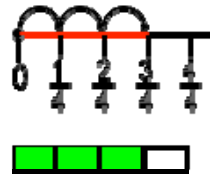


The measure of an exterior angle of a triangle is equal to the sum of the measures of the two remote interior angles.

fraction

fraction

Measurement Model



Bar Diagram
(thickened number line)

Set Model

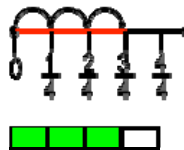


Area Model



What is $\frac{3}{4}$?

Measurement Model



Bar Diagram
(thickened number line)

Set Model



Area Model



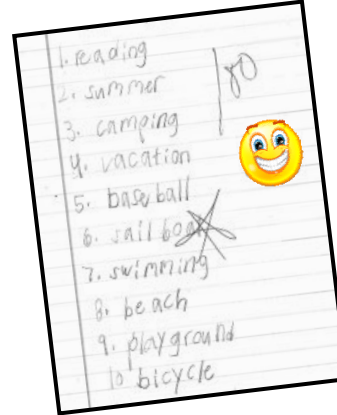
What is $\frac{3}{4}$?

A way of representing part of a whole or part of a group by telling the number of equal parts in the whole and the number of parts you are describing.

fraction

frequency

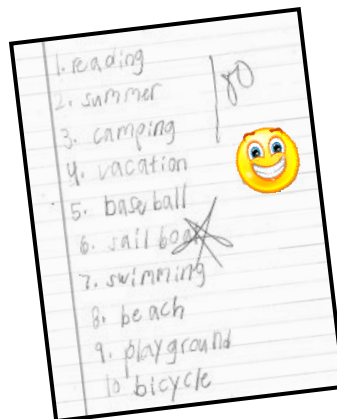
frequency



Spelling Test

Score	Tally	Frequency
1		1
2		1
3		3
4		1
5		4
6	###	5
7	###	6
8	###	5
9		3
10		1

frequency



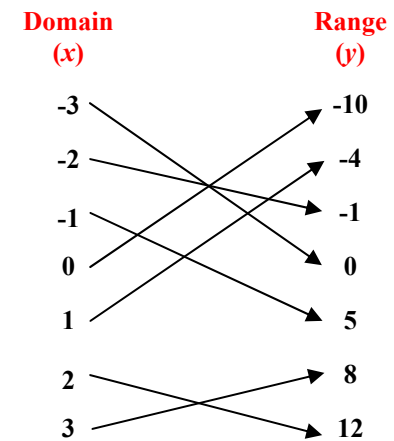
Spelling Test

Score	Tally	Frequency
1		1
2		1
3		3
4		1
5		4
6	###	5
7	###	6
8	###	5
9		3
10		1

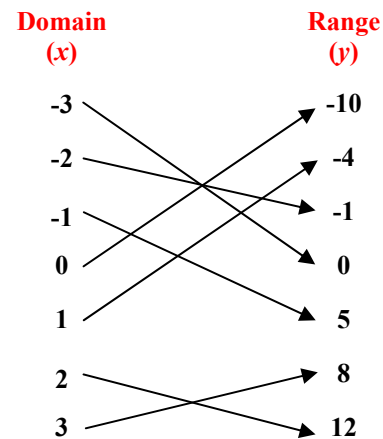
The number of times an event occurs within a specific time period.

function

function



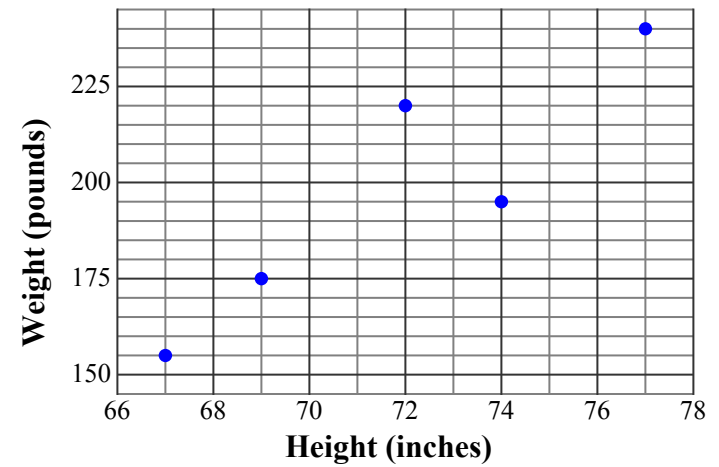
function



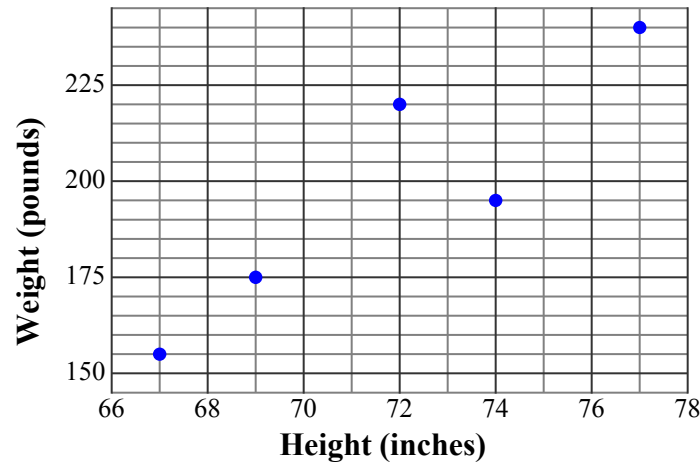
A relation that assigns exactly one value in the range to each value in the domain.

graph

graph



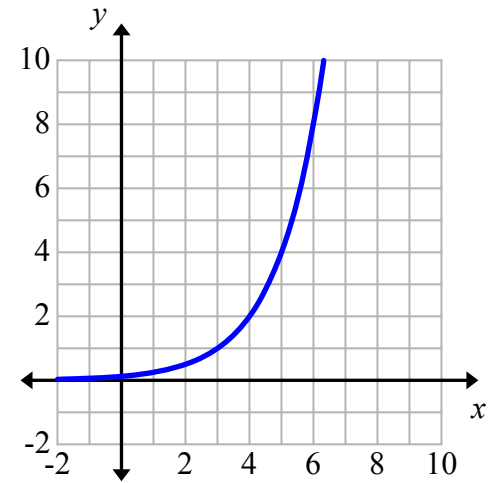
graph



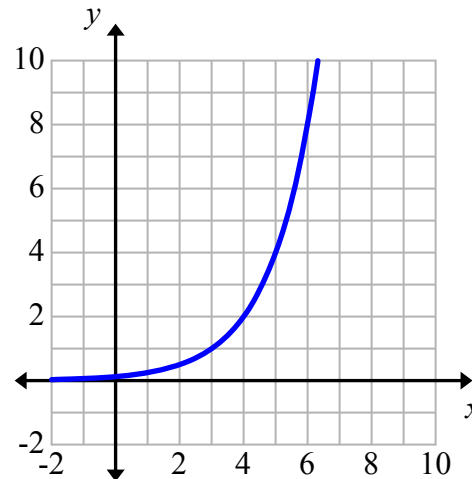
A tool used to display the relationship between two quantitative (numerical) variables.

increasing function

increasing
function



increasing
function



A function whose
 y -value increases as the
 x -value decreases.

inferences

inferences

Every 10 years, the United States Census Bureau surveys the entire United States and organizes all the data they collect. The government then uses statistics to organize and analyze the data to make logical conclusions about what kind of things may happen to us in the future.



IT'S IN OUR HANDS
United States[®]
Census
2010

inferences

Every 10 years, the United States Census Bureau surveys the entire United States and organizes all the data they collect. The government then uses statistics to organize and analyze the data to make logical conclusions about what kind of things may happen to us in the future.

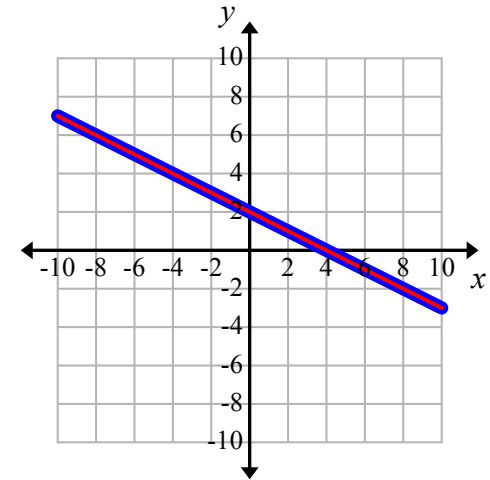


IT'S IN OUR HANDS
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Census
2010

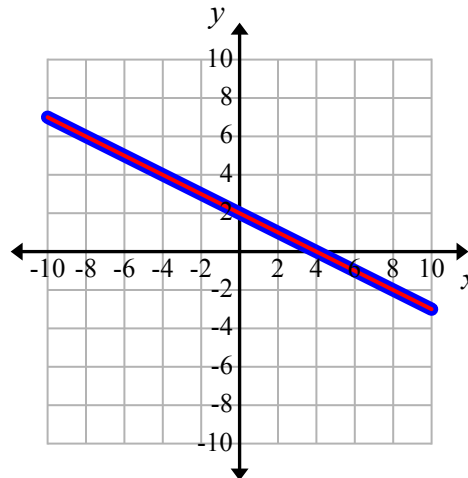
A judgment made by interpreting data.

infinitely many solutions

infinitely many solution



infinitely many solutions



A system of equations that are dependent and consistent.

input

input

$$f(x) = 2(x + 1) - 7$$

input: $x = 3$

$$\begin{aligned} f(3) &= 2(3 + 1) - 7 \\ &= 2(4) - 7 \\ &= 8 - 7 \\ &= 1 \end{aligned}$$

output: 1

input

$$f(x) = 2(x + 1) - 7$$

input: $x = 3$

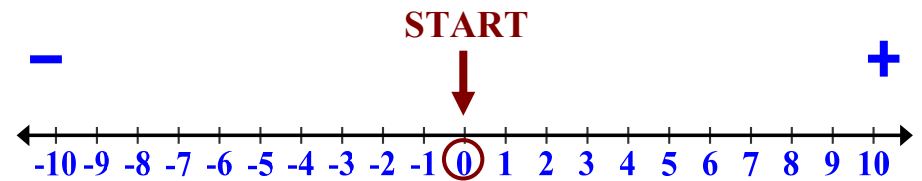
$$\begin{aligned} f(3) &= 2(3 + 1) - 7 \\ &= 2(4) - 7 \\ &= 8 - 7 \\ &= 1 \end{aligned}$$

output: 1

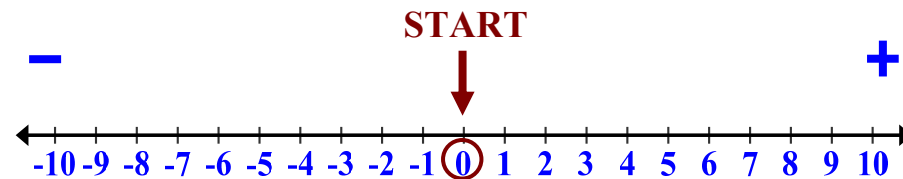
A value of the
independent variable.
(The number you put in
to get the output.)

integers

integers



integers



The set of whole numbers and their opposites.

integer exponents

integer
exponents

$$6^3$$
$$x^{-4}$$
$$7^2$$

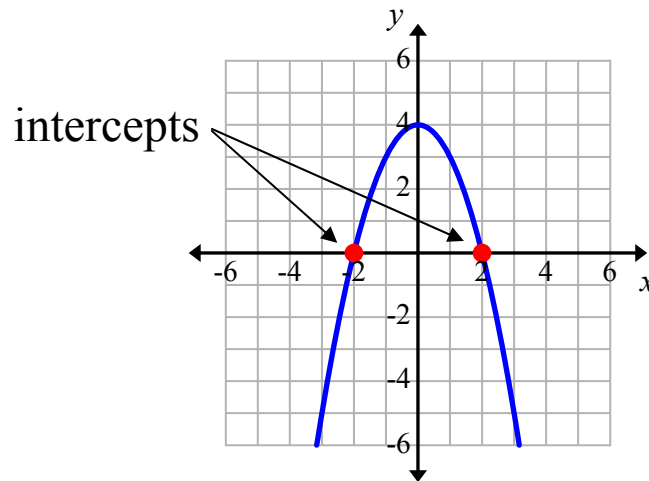
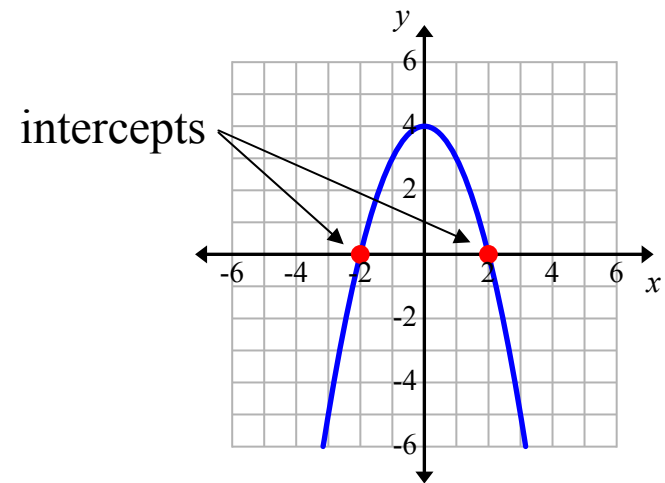
integer
exponents

$$6^3$$
$$x^{-4}$$
$$7^2$$

An integer representing
the power to which a
given base or expression
is to be raised.

intercept

intercept



intercept

The point or coordinates at which a line, curve, or surface intersects a coordinate axis.

irrational numbers

**irrational
numbers**

$\sqrt{2}$

π

e

**irrational
numbers**

$\sqrt{2}$

π

e

A number that cannot be written in the form $\frac{a}{b}$, where a and b are integers and $b \neq 0$. In decimal form, an irrational number cannot be written as a terminating or repeating decimal.

line

line



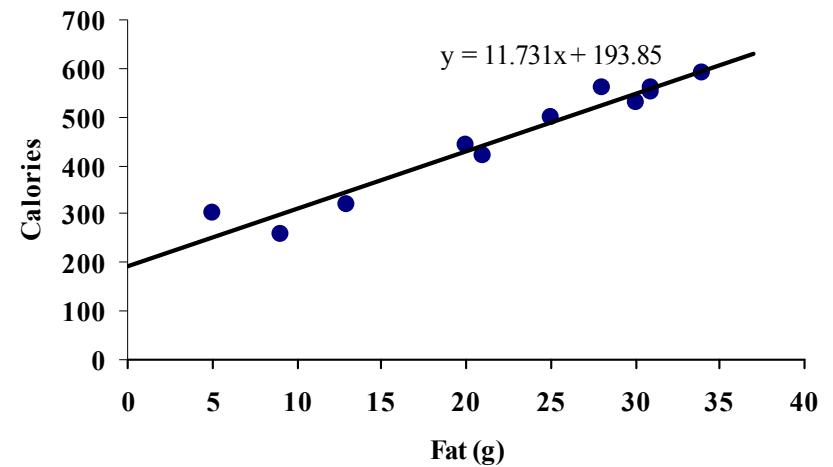
line



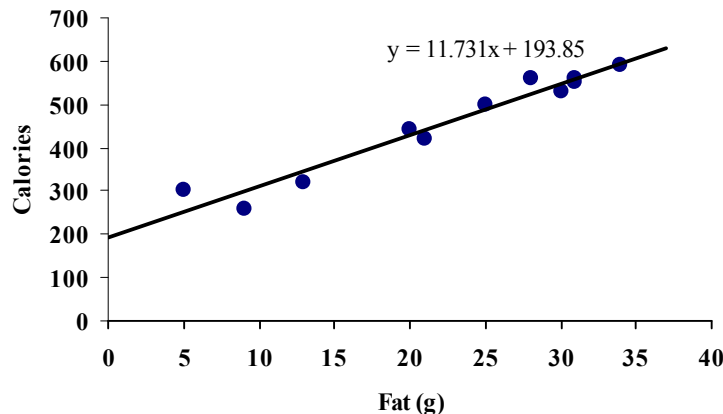
A line is the straight path connecting two points and extending beyond the points in both directions.

line of best fit

line of best fit



line of best fit



A line of best fit (or “trend” line) is a straight line that best represents the data on a scatter plot. This line may pass through some of the points, none of the points, or all of the points.

line segment

line segment



line segment



A line segment is a part of a line that is bounded by two end points, and contains every point on the line between its end points.

linear equation

linear
equation

$$2(x - 5) = 3x + 4$$

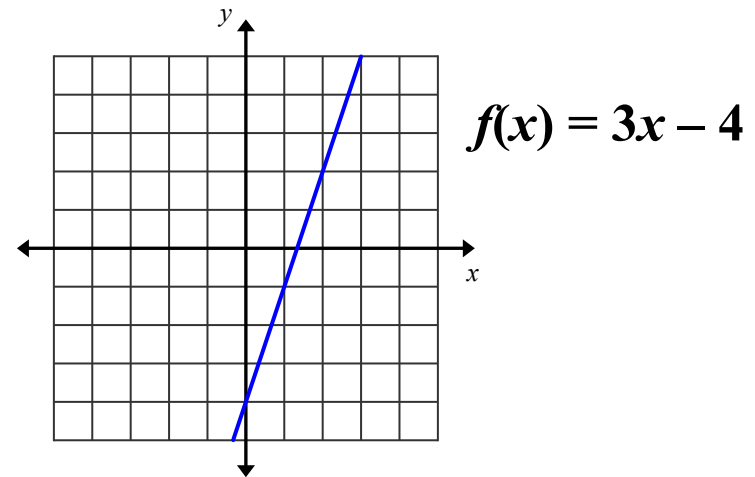
linear
equation

$$2(x - 5) = 3x + 4$$

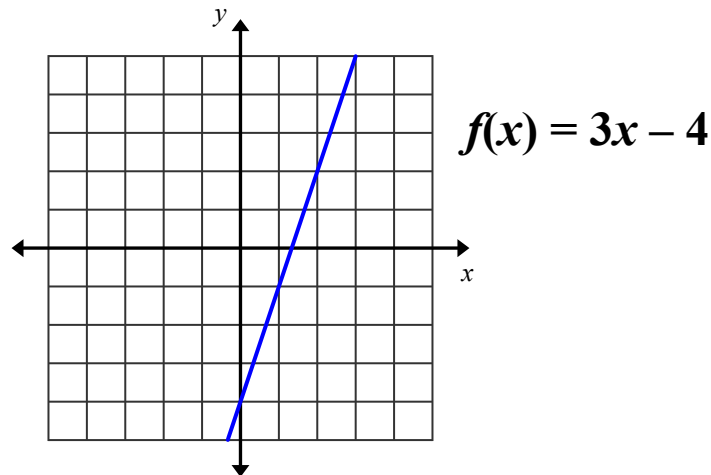
An algebraic equation in which each term is either a constant or the product of a constant and (the first power of) a single variable.

linear function

linear
function



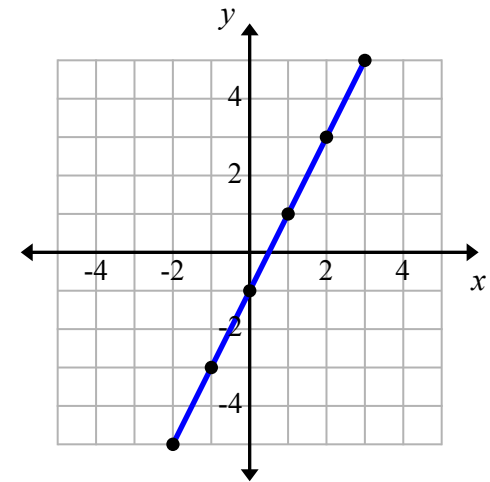
linear
function



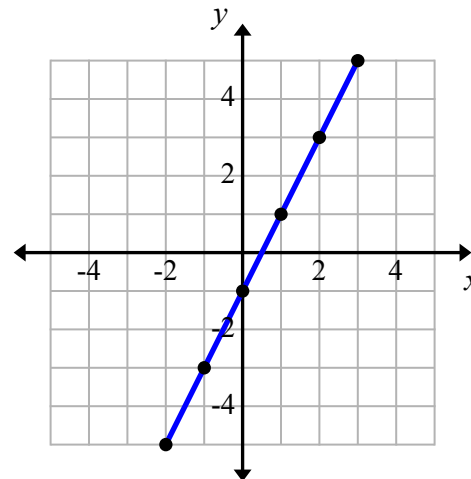
Functions that are a first-degree polynomial of one variable. The graph of the function is a line.

linear relationship

linear
relationship



linear
relationship



The relationship between two variables that appears as a straight line when graphed.

