

Glossary

A

alternate interior angles a pair of angles between two parallel lines on opposite sides of a transversal.

association the relationship between two variables.

B

best-fit line a straight line that matches the pattern of a set of paired data as closely as possible.

bivariate involving two variables.

C

categorical data a data set that is divided into different categories.

center of a dilation the point that is transformed to itself by a dilation.

center of rotation a fixed point around which a figure is rotated.

congruent exactly equal in size and shape.

constant of proportionality the unit rate in a proportional relationship.

corresponding angles a pair of angles in the same position relative to two parallel lines and a transversal.

cube root of x a number that when raised to the third power is equal to x .

D

dilation transformation in which the pre-image and the image are similar.

E

exterior angle an angle formed by one side of a simple, closed polygon and a line extended from an adjacent side.

F

function a relationship between an independent variable, x , and a dependent variable, y , where each value of x (input) has one and only one value of y (output).

H

hypotenuse the side of a right triangle opposite the right angle.

I

initial value the starting output value of a function.

irrational number a number that cannot be expressed as a quotient of two integers, terminating decimal, or repeating decimal.

L

leg a side of a right triangle that is adjacent to the right angle.

line of reflection a line across which a figure is reflected.

Glossary

linear relating to a straight line.

linear function a function with a graph that is a non-vertical straight line, which can be represented by a linear equation in the form $y = mx + b$.

linear pair two angles that are adjacent and supplementary.

N

negative association when one variable decreases with an increase in a second variable.

nonlinear not relating to a straight line.

O

ordered pair an x -coordinate and a y -coordinate written in the format (x, y) .

outlier a data value that is much greater or much less than most of the other values in the data set.

P

perfect cube the product of an integer used as a factor three times.

perfect square the product of an integer times itself.

positive association when one variable increases with an increase in the second variable.

proportional relationship the relationship among a group of ratios that are equivalent.

Pythagorean Theorem in any right triangle, the sum of the squares of the lengths of the legs a and b is equal to the square of the length of the hypotenuse, c : $a^2 + b^2 = c^2$.

Q

qualitative graph a graph that represents a function visually, not with numbers.

R

rate of change the ratio of vertical change (change in y) to horizontal change (change in x) in a function; the rate at which the quantity represented by y increases or decreases with respect to a change in the quantity represented by x .

rational number a number that can be expressed as a quotient of two integers, a repeating decimal, or a terminating decimal.

real numbers all rational and irrational numbers.

reflection a transformation that flips a figure across a line of reflection.

residual the vertical distance between a data point and a best-fit line in a scatter plot.

right triangle a triangle with one right angle.

rotation a transformation that turns a figure around a fixed point.

S

same-side interior angles a pair of angles on the same side of a transversal and between two parallel lines cut by the transversal.

scale factor the ratio of a pair of corresponding sides of similar figures.

scatter plot a graph of ordered pairs in the coordinate plane that represents the values of two variables.

scientific notation numbers written in the form $n \times 10^a$, where $1 \leq n < 10$ and a is an integer.

similar triangles triangles that are scale drawings of one another—they have the same shape but may have a different size.

slope the ratio of the vertical change to the horizontal change; the rate of change of a linear function; for any two points on the graph, rise/run or change in y -value/change in x -value; in the equation $y = mx + b$, the value of m .

slope-intercept form $y = mx + b$, where m is the slope and b is the y -intercept.

square a number to the second power.

square root of x a number that when multiplied by itself is equal to x .

system of linear equations a group of two or more linear equations that share two or more variables.

T

theorem a statement that has been proven on the basis of previously established and accepted statements.

transformation a change in position or size of a figure.

translation a transformation that moves each point of a figure the same distance and in the same direction.

transversal a line that crosses two or more lines, which may be parallel.

U

unit rate the part of the rate that is being compared to 1.

Y

y -intercept the initial value of a linear function; the y -coordinate of the point where a line crosses the y -axis; in the equation $y = mx + b$, the value of b .