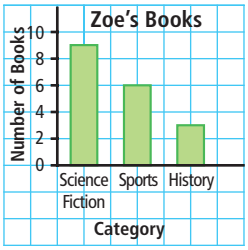
Glossary

B

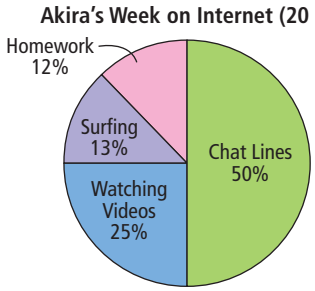
bar graph A graph that uses horizontal or vertical bars to represent data visually.



base of a prism Any face of a prism that reflects the general shape of the prism.

C

circle graph A graph that represents data using sections of a circle. The sum of the percents in a circle graph is 100%.



combined percents Adding individual percents together.

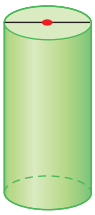
commutative property The order of adding or multiplying quantities does not affect the result.

$a + b = b + a$

$a \times b = b \times a$

constant A number that does not change.

cylinder A three-dimensional object with two parallel and congruent circular bases.



D

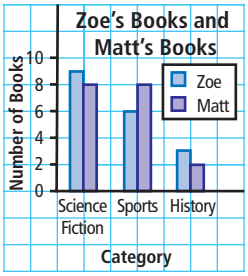
distort To change the appearance or twist the meaning of something in a way that is misleading.

distributive property Multiplication of each term inside the brackets of an expression by the term outside the brackets:

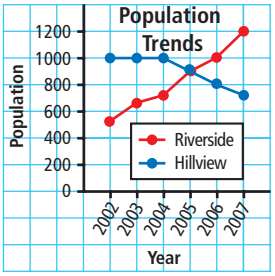
$a(b + c) = a \times b + a \times c$

$= ab + ac$

double bar graph A graph that uses two sets of horizontal or vertical bars to compare two sets of data across categories.

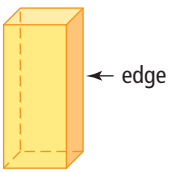


double line graph A graph that uses two lines to represent changes of two sets of data over time.



E

edge A line segment where two faces meet.

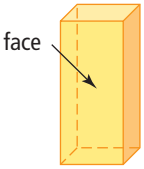


equation A mathematical statement with two expressions that have the same value. The two expressions are separated by an equal sign. $3a - 2 = 4$ is an equation.

expression Any single number, single variable, or combination of operations ($+$, $-$, $\times$, $\div$) involving numbers and variables. An expression does not include an equal sign. $x + 9$, $2y - 7$, $8t$, and 5 are expressions.

F

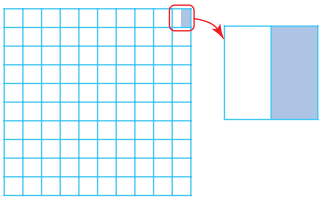
face A flat or curved surface.



favourable outcome A successful result in a probability experiment.

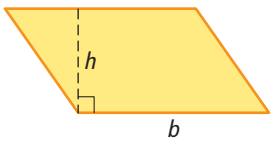
formula A mathematical statement that represents the relationship between specific quantities. An example is $C = \pi \times d$, where C is the circumference and d is the diameter of a circle.

fractional percent A percent that includes a portion of a percent, such as $\frac{1}{2}\%$, 0.42%, $7\frac{3}{8}\%$.

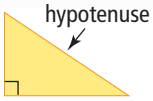


H

height The perpendicular distance from the base to the opposite side. Common symbol is h.



hypotenuse The longest side of a right angle triangle. Opposite the right angle.



I

improper fraction A fraction in which the numerator is greater than the denominator. $\frac{4}{3}$ is an improper fraction.

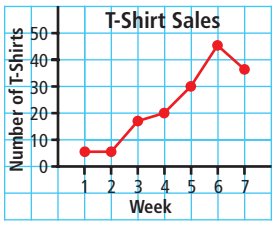
independent events Results in which the outcome of one event has no effect on the outcome of another event.

integer Any of the numbers ..., -3, -2, -1, 0, $+1$, $+2$, $+3$, ...

interval The spread between the smallest and the largest numbers in a range of numbers.

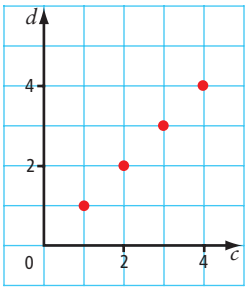
L

line graph A graph that uses a line to represent changes in data over time.



linear equation An equation that, when graphed, results in points that lie along a straight line.

linear relation A pattern made by a set of points that lie in a straight line.

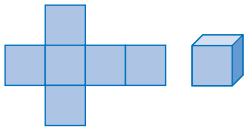


M

mixed number A number made up of a whole number and a fraction, such as $3\frac{1}{2}$.

N

net A two-dimensional figure that, when folded, encloses a 3-D object.



numerical coefficient A number that multiplies the variable. In $2x + 4$, the number 2 is the numerical coefficient.

O

opposite operation A mathematical operation that undoes another operation. Subtraction and addition are opposite operations; multiplication and division are opposite operations. Also called inverse operation.

order of operations The correct sequence of steps for a calculation. Brackets first, then multiply and divide in order from left to right, and then add and subtract in order from left to right.

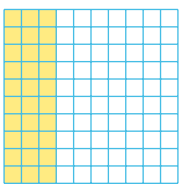
orientation The different position of an object formed by translating, rotating, or reflecting the object.

P

part-to-part ratio Compares different parts of a group to each other.

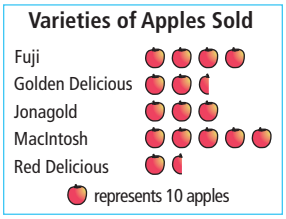
part-to-whole ratio Compares one part of a group to the whole group. Can be written as $a:b$ or $\frac{a}{b}$.

percent Means out of 100 and is another way of saying hundredths. 30% means $\frac{30}{100}$ or 0.30.



perfect square A number that is the product of two identical factors. It has an even number of prime factors. $2 \times 2 = 4$, so 4 is a perfect square. $2 \times 2 \times 3 \times 3 = 36$, so 36 is a perfect square.

pictograph A graph that illustrates data using pictures and symbols.



plane A two-dimensional flat surface that extends in all directions.

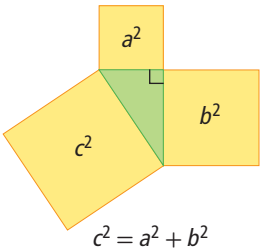
prime factorization A number written as the product of its prime factors. The prime factorization of 6 is 2×3.

probability The likelihood or chance of an event occurring. Probability can be expressed as a ratio, a fraction, or a percent.

proper fraction A fraction in which the denominator is greater than the numerator. $\frac{5}{8}$ is a proper fraction.

proportion An equation that says that two ratios or two rates are equal. It can be written in fraction form as $\frac{1}{4} = \frac{4}{16}$, or in ratio form as $1:4 = 4:16$.

Pythagorean relationship The relationship between the lengths of the sides of a right triangle. The sum of the areas of the squares attached to the legs of the triangle equals the area of the square attached to the hypotenuse.



R

rate A comparison of two quantities measured in different units. $1.69 per 100 grams or $1.69/100 g is a rate for purchasing bulk food. 72 beats per minute or 72 beats/min is a heart rate.

reciprocal The multiplier of a number to give a product of 1. $\frac{3}{4}$ is the reciprocal of $\frac{4}{3}$ because $\frac{3}{4} \times \frac{4}{3} = 1$.

rectangular prism A prism whose bases are congruent rectangles.

right prism A prism that has sides that are perpendicular to the bases of the prism.

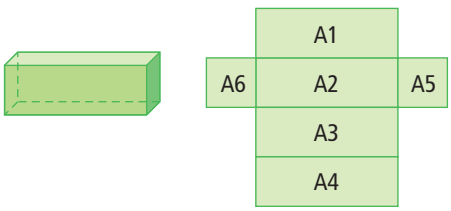
S

sample space All possible outcomes of a probability experiment.

sign rules In division, the quotient of two integers with the same sign is positive, and with different signs is negative. In multiplication, the product of two integers with the same sign is positive, and with different signs is negative.

square root A number that when multiplied by itself equals a given value. The symbol is $\sqrt{\ }$. 9 is the square root of 81 because $9 \times 9 = 81$.

surface area The number of square units needed to cover a 3-D object. The sum of the areas of all the faces of an object.

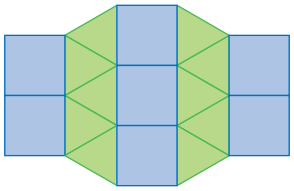


T

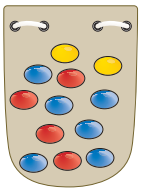
table of values A chart showing two sets of related numbers.

x	1	2	3	4
y	5	10	15	20

tessellation A pattern that covers an area or plane without overlapping or leaving gaps. Also called a tiling pattern.



three-term ratio Compares three quantities measured in the same units. Can be written as $a:b:c$, or a to b to c.



blue:red:yellow is 6:4:2

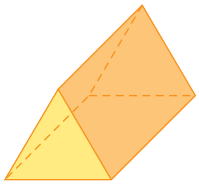
tiling pattern A pattern that covers an area or plane without overlapping or leaving gaps. Also called a tessellation.

tiling the plane Using repeated congruent figures to cover an area without leaving gaps or overlapping.

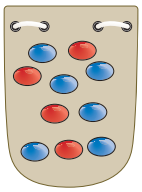
transformation A change in a figure that results in a different position or orientation. Examples are translations, reflections, and rotations.

trend The general direction in which a line graph is going.

triangular prism A prism with two triangular faces that are the same size and shape.



two-term ratio Compares two quantities measured in the same units. Can be written as $a:b$ or a to b.



blue:red is 6:4

U

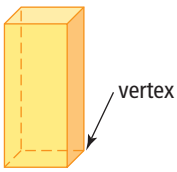
unit price A unit rate that involves prices. Often shown per 100 g or 100 mL. $5.00 per 100 g is a unit price.

unit rate A rate in which the second term is 1. 64 beats/min is a unit rate.

V

variable A letter that represents an unknown number. In $3a - 5$, the variable is a.

vertex The point where three or more edges of a figure meet. The plural is vertices.



volume The amount of space an object occupies. Measured in cubic units.

Z

zero pair A pair of integer chips with one chip representing $+1$ and one chip representing -1. The pair represents zero because $(+1) + (-1) = 0$. Any whole number of zero pairs represents zero.

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