

GLOSSARY/GLOSARIO

Cómo usar el glosario en español:

1. Busca el término en inglés que desees encontrar.
2. El término en español, junto con la definición, se encuentra debajo del término en inglés.

A

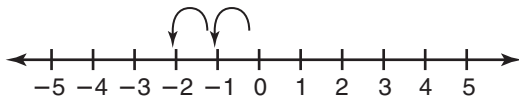
absolute value a number's distance from zero on the number line

valor absoluto la distancia de un número desde cero en la recta numérica

Example/Ejemplo:

-2 is 2 units from 0.

-2 está a dos unidades de 0.



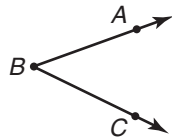
The **absolute value** of -2 is 2 or $|-2| = 2$.

El **valor absoluto** de -2 es 2 o $|-2| = 2$.

angle two rays that meet at a common endpoint

ángulo dos semirrectas que se encuentran en un punto final común

Example/Ejemplo:



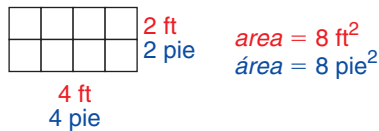
$\angle ABC$ is formed by \vec{BA} and \vec{BC} .

$\angle ABC$ está formado por \vec{BA} y \vec{BC} .

area the size of a surface, expressed in square units

área el tamaño de una superficie expresada en unidades cuadradas

Example/Ejemplo:



B

base [1] the side or face on which a three-dimensional shape stands; [2] the number of characters a number system contains

base [1] el lado o cara donde descansa una figura tridimensional; [2] el número de caracteres que contiene un sistema numérico

benchmark a point of reference from which measurements can be made

punto de referencia un punto de referencia desde donde se pueden tomar medidas

budget a spending plan based on an estimate of income and expenses

presupuesto plan de gastos basado en una estimación de ingresos y expensas

C

cells small rectangles in a spreadsheet that hold information. Each rectangle can store a label, number, or formula

casillas rectángulos pequeños en una hoja de cálculo que contienen información. Cada rectángulo puede contener un rótulo, número o fórmula

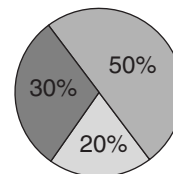
chance the probability or likelihood of an occurrence, often expressed as a fraction, decimal, percentage, or ratio

posibilidad la probabilidad de una ocurrencia, a menudo expresada como fracción, decimal, porcentaje o razón

circle graph (pie chart) a way of displaying statistical data by dividing a circle into proportionally-sized "slices"

gráfica circular (gráfica de pastel) una forma de demostrar datos estadísticos dividiendo un círculo en "tajadas" proporcionalmente dimensionales

Example/Ejemplo:



Favorite Color
Color Favorito

circumference the distance around a circle, calculated by multiplying the diameter by the value of pi

circunferencia la distancia alrededor de un círculo calculada mediante la multiplicación del diámetro por el valor de pi

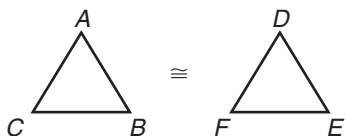
columns vertical lists of numbers or terms; in spreadsheets, the names of cells in a column all beginning with the same letter {A1, A2, A3, A4, ...}

columnas listas verticales de números o términos; en las hojas de cálculo, los nombres de las casillas en una columna que comienzan con la misma letra {A1, A2, A3, A4, ...}

congruent figures figures that have the same size and shape. The symbol \cong is used to indicate congruence.

figuras congruentes figuras que tienen el mismo tamaño y forma. El símbolo \cong se usa para indicar congruencia.

Example/Ejemplo:



Triangles *ABC* and *DEF* are congruent.
Los triángulos *ABC* y *DEF* son congruentes.

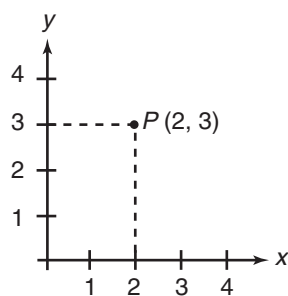
coordinate graph the representation of points in space in relation to reference lines—usually, a horizontal *x*-axis and a vertical *y*-axis

gráfica de coordenada la representación de puntos en el espacio en relación con las rectas de referencia—generalmente un eje *x* horizontal y un eje *y* vertical

coordinates an ordered pair of numbers that describes a point on a coordinate graph. The first number in the pair represents the point's distance from the origin (0, 0) along the *x*-axis, and the second represents its distance from the origin along the *y*-axis.

coordenadas un par de números ordenados que describen un punto en una gráfica de coordenadas. El primer número en el par representa la distancia del punto desde el origen (0, 0) a lo largo del eje *x* y el segundo representa su distancia desde el origen a lo largo del eje *y*.

Example/Ejemplo:



Point *P* has coordinates (2, 3).
El punto *P* tiene las coordenadas (2, 3).

counterexample a specific example that proves a general mathematical statement to be false

contraejemplo un ejemplo específico que demuestra la falsedad de un enunciado matemático general

cross product a method used to solve proportions and test whether ratios are equal: $\frac{a}{b} = \frac{c}{d}$ if $ad = bc$

producto cruzado un método usado para resolver proporciones y comprobar si los ratios son iguales: $\frac{a}{b} = \frac{c}{d}$ si $ad = bc$

cube (v.) to multiply a number by itself and then by itself again

cubicar multiplicar un número dos veces por sí mismo

Example/Ejemplo: $2^3 = 2 \times 2 \times 2 = 8$

cube root the number that must be multiplied by itself and then by itself again to produce a given number

raíz cúbica el número que se multiplica dos veces por sí mismo para obtener un número determinado

Example/Ejemplo: $\sqrt[3]{8} = 2$

D

decimal system the most commonly used number system, in which whole numbers and fractions are represented using base ten

sistema decimal el sistema numérico más comúnmente usado en el cual los números enteros y las fracciones se representan usando bases de diez

Example: Decimal numbers include 1,230, 1.23, 0.23, and -123 .

Ejemplo: Los números decimales incluyen 1,230, 1.23, 0.23 y -123 .

discount a deduction made from the regular price of a product or service

descuento deducción hecha del precio regular de un producto o servicio

E

equation a mathematical sentence stating that two expressions are equal

ecuación enunciado matemático que expresa que dos expresiones son iguales

Example/Ejemplo: $3 \times (7 + 8) = 9 \times 5$

equivalent equal in value

equivalente igual en valor

equivalent expressions expressions that always result in the same number, or have the same mathematical meaning for all replacement values of their variables

expresiones equivalentes expresiones que siempre tienen el mismo número como resultado o el mismo significado matemático para todos los valores sustitutos de sus variables

Examples/Ejemplos: $\frac{9}{3} + 2 = 10 - 5$
 $2x + 3x = 5x$

equivalent fractions fractions that represent the same quotient but have different numerators and denominators

fracciones equivalentes fracciones que representan el mismo cociente, pero tienen numeradores y denominadores diferentes

Example/Ejemplo: $\frac{5}{6} = \frac{15}{18}$

estimation a value that is the result of an approximation or rough calculation

estimación un valor que es el resultado de una aproximación o cálculo aproximado

even number any whole number that is a multiple of 2 {2, 4, 6, 8, 10, 12, . . . }

número par cualquier número entero múltiplo de 2 {2, 4, 6, 8, 10, 12, . . . }

expense an amount of money paid; cost

gasto cantidad de dinero pagada; costo

experimental probability a ratio that shows the total number of times the favorable outcome happened to the total number of times the experiment was done

probabilidad experimental una razón que muestra el número total de veces que ocurrió un resultado favorable en el número total de veces que se realizó el experimento

expression a mathematical combination of numbers, variables, and operations

expresión combinación matemática de números, variables y operaciones

Example/Ejemplo: $6x + y^2$

F

factor a number or expression that is multiplied by another to yield a product

factor un número o expresión que se multiplica por otro para obtener un producto

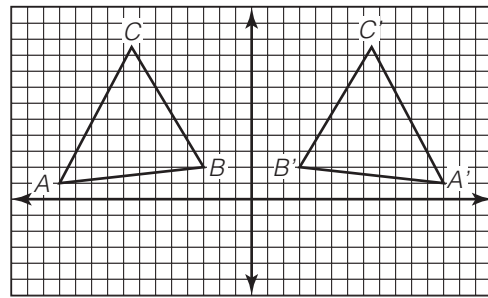
Example: 3 and 11 are *factors* of 33.

Ejemplo: 3 y 11 son *factores* de 33.

flip to “turn over” a shape

invertir “volar” una figura

Example/Ejemplo:



$\Delta A'B'C'$ is a *flip* of ΔABC .
 $\Delta A'B'C'$ es una *inversión* de ΔABC .

formula an equation that shows the relationship between two or more quantities; a calculation performed by spreadsheet

fórmula una ecuación que muestra la relación entre dos o más cantidades; cálculo realizado en una hoja de cálculo

Example: $A = \pi r^2$ is the *formula* for calculating the area of a circle; $A2 \times B2$ is a spreadsheet *formula*

Ejemplo: $A = \pi r^2$ es la *fórmula* para calcular el área de un círculo; $A2 \times B2$ es una *fórmula* de una hoja de cálculo

fraction a number representing some part of a whole; a quotient in the form $\frac{a}{b}$

fracción un número que representa una parte de un entero; un cociente en la forma $\frac{a}{b}$

frequency graph a graph that shows similarities among the results so one can quickly tell what is typical and what is unusual

gráfica de frecuencia una gráfica que muestra similitudes entre los resultados de forma que podamos notar rápidamente lo que es típico y lo que es inusual

H

horizontal a flat, level line or plane

horizontal plano o línea horizontal

I

income the amount of money received for labor, services, or the sale of goods or property

ingreso la cantidad de dinero recibida producto del trabajo, servicios o venta de bienes o propiedad

inequality a statement that uses the symbols $>$ (greater than), $<$ (less than), \geq (greater than or equal to), and \leq (less than or equal to) to indicate that one quantity is larger or smaller than another

desigualdad enunciado que utiliza símbolos $>$ (mayor que), $<$ (menor que), \geq (mayor que o igual a) y \leq (menor que o igual a) para indicar que una cantidad es mayor o menor que otra

Examples/Ejemplos: $5 > 3$; $\frac{4}{5} < \frac{5}{4}$;
 $2(5 - x) > 3 + 1$

L

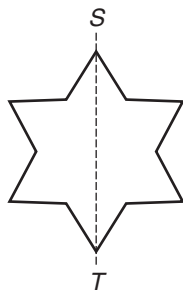
law of large numbers when you experiment by doing something over and over, you get closer and closer to what things “should” be theoretically. For example, when you repeatedly throw a dice, the proportion of 1’s that you throw will get closer to $\frac{1}{6}$ (which is the theoretical proportion of 1’s in a batch of throws).

ley de los grandes números cuando experimentas haciendo algo varias veces, te acercas cada vez más a cómo “deben” ser las cosas teóricamente. Por ejemplo, cuando tiras un dado repetidamente, la proporción de los 1 que tiras se aproximará a $\frac{1}{6}$ (que es la proporción teórica de los 1 en un grupo de tiradas).

line of symmetry a line along which a figure can be folded so that the two resulting halves match

eje de simetría recta por la que se puede doblar una figura de manera que las dos mitades resultantes sean iguales

Example/Ejemplo:



\overline{ST} is a *line of symmetry*.
 \overline{ST} es un *eje de simetría*.

M

mathematical argument a series of logical steps a person might follow to determine whether a statement is correct

argumento matemático una serie de pasos lógicos que una persona podría seguir para determinar si un enunciado es correcto

mean the quotient obtained when the sum of the numbers in a set is divided by the number of addends

media el cociente que se obtiene cuando la suma de los números de un conjunto se divide entre el número de sumandos

Example: The *mean* of 3, 4, 7, and 10 is
 $(3 + 4 + 7 + 10) \div 4$ or 6.

Ejemplo: La *media* de 3, 4, 7 y 10 es
 $(3 + 4 + 7 + 10) \div 4$ o 6.

median the middle number in an ordered set of numbers

mediana el número medio en un conjunto de números ordenado

Example: 1, 3, 9, 16, 22, 25, 27
 16 is the *median*.

Ejemplo: 1, 3, 9, 16, 22, 25, 27
 16 es la *mediana*.

metric system a decimal system of weights and measurements based on the meter as its unit of length, the kilogram as its unit of mass, and the liter as its unit of capacity

sistema métrico sistema decimal de pesos y medidas que tiene por base el metro como su unidad de longitud, el kilogramo como su unidad de masa y el litro como su unidad de capacidad

N

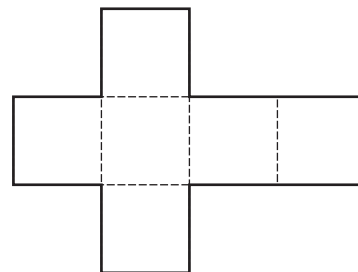
natural variability the difference in results in a small number of experimental trials from the theoretical probabilities

variabilidad natural la diferencia en los resultados de una pequeña cantidad de ensayos experimentales de probabilidades teóricas

net a two-dimensional plan that can be folded to make a three-dimensional model of a solid

red un diagrama bidimensional que se puede doblar para hacer un modelo tridimensional de un cuerpo sólido

Example/Ejemplo:



net of a cube
red de un cubo

O

ordered pair two numbers that tell the x -coordinate and y -coordinate of a point

par ordenado dos números que expresan la coordenada x y la coordenada y de un punto

Example: The coordinates (3, 4) are an *ordered pair*. The x -coordinate is 3, and the y -coordinate is 4.

Ejemplo: Las coordenadas (3, 4) son un *par ordenado*. La coordenada x es 3 y la coordenada y es 4.

outcome a possible result in a probability experiment
resultado efecto y consecuencia posible de un experimento de probabilidad

outcome grid a visual model for analyzing and representing theoretical probabilities that shows all the possible outcomes of two independent events
cuadrícula de resultados modelo visual para analizar y representar probabilidades teóricas que muestra todos los posibles resultados de dos sucesos independientes

Example/Ejemplo:

The sample space for rolling a pair of dice

El espacio del modelo donde se lanza un par de dados

	1	2	3	4	5	6
1	(1, 1)	(2, 1)	(3, 1)	(4, 1)	(5, 1)	(6, 1)
2	(1, 2)	(2, 2)	(3, 2)	(4, 2)	(5, 2)	(6, 2)
3	(1, 3)	(2, 3)	(3, 3)	(4, 3)	(5, 3)	(6, 3)
4	(1, 4)	(2, 4)	(3, 4)	(4, 4)	(5, 4)	(6, 4)
5	(1, 5)	(2, 5)	(3, 5)	(4, 5)	(5, 5)	(6, 5)
6	(1, 6)	(2, 6)	(3, 6)	(4, 6)	(5, 6)	(6, 6)

There are 36 possible outcomes. Hay 36 resultados posibles.

P

pattern a regular, repeating design or sequence of shapes or numbers

patrón diseño regular y repetido o secuencia de formas o números

percent a number expressed in relation to 100, represented by the symbol %
por ciento un número expresado con relación a 100, representado por el signo %

Example: 76 out of 100 students use computers.
 76 percent of students use computers.

Ejemplo: 76 de 100 estudiantes usan computadoras.
 El 76 por ciento de los estudiantes usan computadoras.

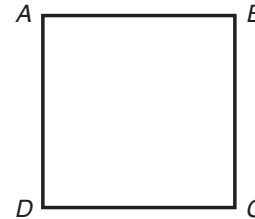
perfect square a number that is the square of an integer. For example, 25 is a *perfect square* since $25 = 5^2$.

cuadrado perfecto el número que es el cuadrado de un número entero. Por ejemplo, 25 es el cuadrado perfecto como que $25 = 5^2$.

perimeter

the distance around the outside of a closed figure
perímetro la distancia alrededor del contorno de una figura cerrada

Example/Ejemplo:



$$AB + BC + CD + DA = \textit{perimeter}$$

$$AB + BC + CD + DA = \textit{perímetro}$$

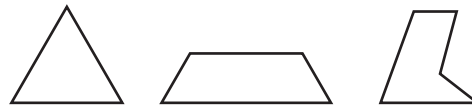
pi the ratio of a circle's circumference to its diameter. Pi is shown by the symbol π , and is approximately equal to 3.14.

pi La razón de la circunferencia de un círculo a la de su diámetro. Pi se muestra con el símbolo π y es aproximadamente igual a 3.14.

polygon a simple, closed plane figure, having three or more line segments as sides

polígono una figura plana, simple y cerrada que tiene tres o más líneas rectas como sus lados

Examples/Ejemplos:



polygons
polígonos

price the amount of money or goods asked for or given in exchange for something else

precio cantidad de dinero o bienes pedida o dada a cambio de algo

prime number a whole number greater than 1 whose only factors are 1 and itself

número primo un número entero mayor que 1, cuyos únicos factores son 1 y él mismo.

Examples/Ejemplos: 2, 3, 5, 7, 11

probability the study of likelihood or chance that describes the chances of an event occurring

probabilidad el estudio de las probabilidades que describen las posibilidades de que ocurra un suceso

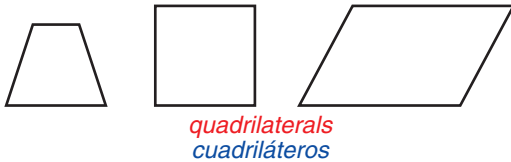
profit the gain from a business; what is left when the cost of goods and of carrying on the business is subtracted from the amount of money taken in
ganancia lucro de una empresa; lo que queda cuando se resta el costo de los bienes y los gastos que corre la empresa de la cantidad de dinero obtenida

proportion a statement that two ratios are equal
proporción igualdad de dos razones

Q

quadrilateral a polygon that has four sides
cuadrilátero un polígono que tiene cuatro lados

Examples/Ejemplos:



qualitative graphs a graph with words that describes such things as a general trend of profits, income, and expenses over time. It has no specific numbers.
gráfica cualitativa gráfica de palabras que describe temas como el movimiento general de las ganancias, el ingreso y los gastos en un periodo de tiempo. No tiene números específicos.

R

radius a line segment from the center of a circle to any point on its circumference

radio recta que va desde el centro del círculo hasta cualquier punto de su circunferencia

rate [1] fixed ratio between two things; [2] a comparison of two different kinds of units, for example, miles per hour or dollars per hour

tasa [1] razón fija entre dos cosas; [2] comparación de dos tipos diferentes de unidades, por ejemplo, millas por hora o dólares por hora

ratio a comparison of two numbers

razón una comparación de dos números

Example: The *ratio* of consonants to vowels in the alphabet is 21:5.

Ejemplo: La razón entre las consonantes y las vocales en el abecedario es de 21:5.

rectangle a parallelogram with four right angles
rectángulo paralelogramo con cuatro ángulos rectos

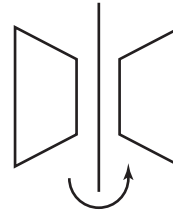
Example/Ejemplo:



reflection a type of transformation where a figure is flipped over a line of symmetry

reflexión un tipo de transformación donde una figura se invierte por su eje de simetría

Example/Ejemplo:

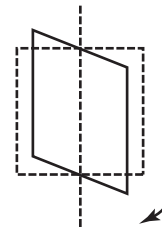


reflection of a trapezoid
reflexión de un trapecoide

rotation a transformation in which a figure is turned a certain number of degrees around a fixed point or line
see turn

rotación una transformación en la cual una figura gira un cierto número de grados alrededor de un punto fijo o eje
ver girar

Example/Ejemplo:



rotation of a square
rotación de un cuadrado

row a horizontal list of numbers or terms. In spreadsheets, the labels of cells in a *row* all end with the same number (A3, B3, C3, D3, . . .)

fila lista horizontal de números o términos. En las hojas de cálculo, los rótulos de las casillas en una fila terminan en el mismo número (A3, B3, C3, D3, . . .)

S

scale the ratio between the actual size of an object and a proportional representation

escala la razón entre el tamaño real de un objeto y una representación proporcional

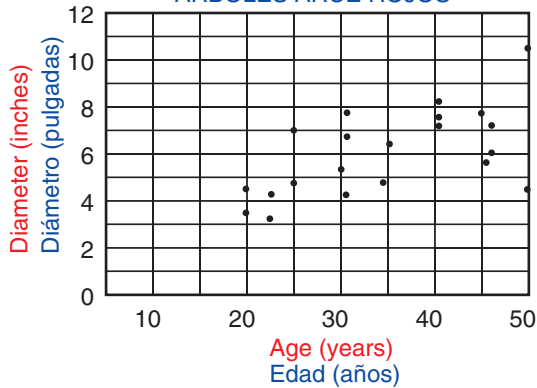
scale size the proportional size of an enlarged or reduced representation of an object or area

tamaño de escala el tamaño proporcional de una representación aumentada o reducida de un objeto o área

scatter plot (or scatter diagram) a two-dimensional graph in which the points corresponding to two related factors (for example, smoking and life expectancy) are graphed and observed for correlation
gráfica de dispersión (diagrama de dispersión) gráfica bidimensional donde los puntos correspondientes a dos factores relacionados (por ejemplo, fumar y la esperanza de vida) se representan gráficamente y se observan para su correlación

Example/Ejemplo:

AGE AND DIAMETER OF RED MAPLE TREES
 EDAD Y DIÁMETRO DE LOS
 ÁRBOLES ARCE ROJOS



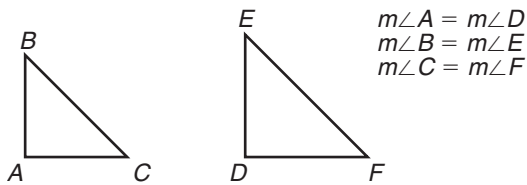
signed number a number preceded by a positive or negative sign. Positive numbers are usually written without a sign.

número con signo un número precedido por un signo positivo o negativo. Los números positivos por lo general se escriben sin signo.

similar figures have the same shape but are not necessarily the same size

figuras similares que tienen la misma forma, pero no necesariamente el mismo tamaño

Example/Ejemplo:



$$\begin{aligned} m\angle A &= m\angle D \\ m\angle B &= m\angle E \\ m\angle C &= m\angle F \end{aligned}$$

Triangles *ABC* and *DEF* are similar figures.
 Los triángulos *ABC* y *DEF* son figuras similares.

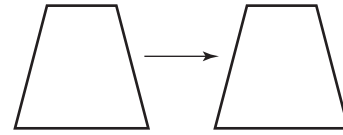
simulation a mathematical experiment that approximates real-world process

simulación experimento matemático que aproxima el proceso del mundo real

slide to move a shape to another position without rotating or reflecting it

desplazar mover una figura hacia otra posición sin rotarla o reflejarla

Example/Ejemplo:



slide of a trapezoid
 desplazamiento de un trapecoide

solution the answer to a mathematical problem. In algebra, a solution usually consists of a value or set of values for a variable.

solución la respuesta a un problema matemático. En álgebra, una solución generalmente consiste en el valor o conjunto de valores de una variable.

spreadsheet a computer tool where information is arranged into cells within a grid and calculations are performed within the cells. When one cell is changed, all other cells that depend on it automatically change.
hoja de cálculo herramienta de las computadoras donde la información es organizada en casillas dentro de una cuadrícula y se realizan cálculos dentro de las casillas. Cuando una casilla cambia, el resto de las casillas que dependen de ella cambian automáticamente.

square number a number that can be expressed as x^2
número cuadrado un número que se puede expresar como x^2

Examples/Ejemplos: 1, 4, 9, 16, 25, 36

square root a number that when multiplied by itself produces a given number. For example, 3 is the square root of 9.

raíz cuadrada un número que cuando se multiplica por sí mismo produce un número determinado. Por ejemplo, 3 es la raíz cuadrada de 9.

Example/Ejemplo: $3 \times 3 = 9$; $\sqrt{9} = 3$

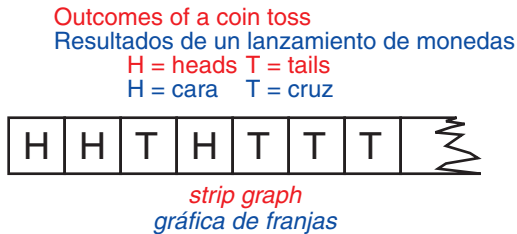
statistics the branch of mathematics concerning the collection and analysis of data

estadística la rama de las matemáticas que estudia la colección y análisis de datos

strip graph a graph indicating the sequence of outcomes. A *strip graph* helps to highlight the differences among individual results and provides a strong visual representation of the concept of randomness.

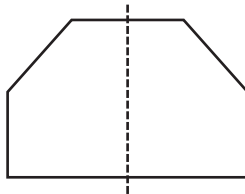
gráfica de franjas gráfica que indica la secuencia de resultados. Una gráfica de franjas ayuda a destacar las diferencias entre resultados individuales y provee una representación visual fuerte del concepto de aleatoriedad

Example/Ejemplo:



symmetry see line of symmetry
simetría ver eje de simetría

Example/Ejemplo:



This hexagon has *symmetry* around the dotted line.
Este hexágono tiene *simetría* alrededor de la línea de puntos.

T

table a collection of data arranged so that information can be easily seen

tabla una colección de datos organizados de forma que la información pueda ser vista fácilmente

theoretical probability the ratio of the number of favorable outcomes to the total number of possible outcomes

probabilidad teórica la razón del número de resultados favorables en el número total de resultados posibles

three-dimensional having three measurable qualities: length, height, and width

tridimensional que tiene tres propiedades de medición: longitud, altura y ancho

transformation a mathematical process that changes the shape or position of a geometric figure see *reflection, rotation, translation*

transformación proceso matemático que cambia la forma o posición de una figura geométrica ver *reflexión, rotación y traslación*

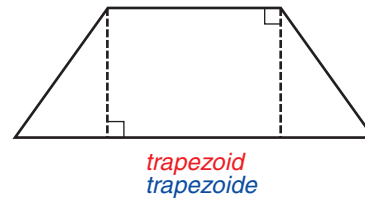
translation a transformation in which a geometric figure is slid to another position without rotation or reflection

traslación transformación en la que una figura geométrica se desplaza hacia otra posición sin rotación o reflexión

trapezoid a quadrilateral with only one pair of parallel sides

trapezoide un cuadrilátero con un solo par de lados paralelos

Example/Ejemplo:



trend a consistent change over time in the statistical data representing a particular population

tendencia cambio consistente con en el tiempo de los datos estadísticos que representan a una población en particular

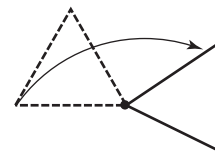
triangle a polygon that has three sides

triángulo un polígono que tiene tres lados

turn to move a geometric figure by rotating it around a point

girar mover una figura geométrica rotándola a su alrededor

Example/Ejemplo:



turning of a triangle
giro de un triángulo

two-dimensional having two measurable qualities: length and width

bidimensional que tiene dos propiedades de medición: longitud y ancho

U

unit cost the cost of an item per unit, such as *per ounce* or *each*

costo de unidad el costo de un artículo por unidad, tal como *por onza* o *de cada uno*

unit price the price of an item expressed in a standard measure, such as *per ounce* or *per pint* or *each*

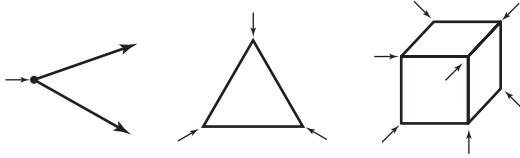
precio de unidad el precio de un artículo expresado en su medida estándar, tal como *por onza* o *por pinta* o *de cada uno*

V

vertex (pl. *vertices*) the common point of two rays of an angle, two sides of a polygon, or three or more faces of a polyhedron

vértice el punto común de las dos semirrectas de un ángulo, dos lados de un polígono o tres o más caras de un poliedro

Examples/Ejemplos:



vertex of an angle
vértice de un ángulo

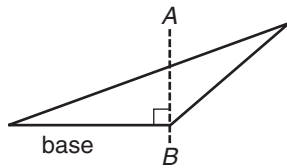
vertices of a triangle
vértices de un triángulo

vertices of a cube
vértices de un cubo

vertical a line that is perpendicular to a horizontal base line

vertical recta que es perpendicular a la recta horizontal

Example/Ejemplo:



\overline{AB} is *vertical* to the base of this triangle.

\overline{AB} es *vertical* a la base de este triángulo.

W

what-if questions a question posed to frame, guide, and extend a problem

preguntas de “¿Qué sucedería si..?” interrogación hecha para formular, dirigir y ampliar un problema

X

x-axis the horizontal reference line in the coordinate graph

eje x recta de referencia horizontal en la gráfica de coordenadas

Y

y-axis the vertical reference line in the coordinate graph

eje y recta de referencia vertical en la gráfica de coordenadas

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