English 4th Grade A-L Vocabulary Cards and Word Walls

Revised: August 30, 2013

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

<u>Illustrated Dictionary of Math</u>, 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

Oxford Illustrated Math Dictionary, 2012. ISBN: 978-0-19-407128-4

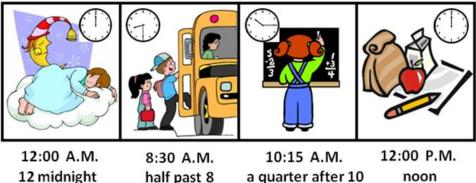
Student Reference Books, Everyday Mathematics, 2007.

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

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

a.m.

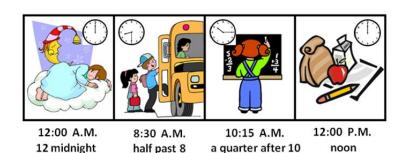
a.m.



12 midnight

half past 8

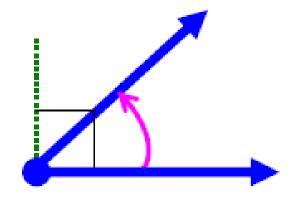
a.m.



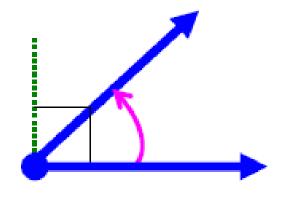
A time between 12:00 midnight and 12:00 noon.

acute angle

acute angle



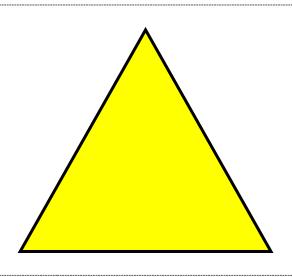
acute angle



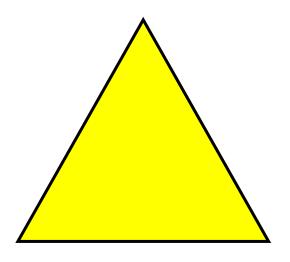
An angle with a measure less than 90°.

acute triangle

acute triangle



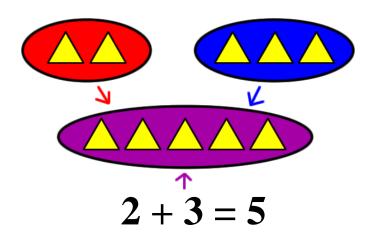
acute triangle



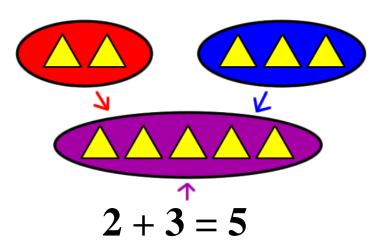
A triangle with no angle measuring 90° or more.

add

add



add



To combine; put together two or more quantities.

addend

addend

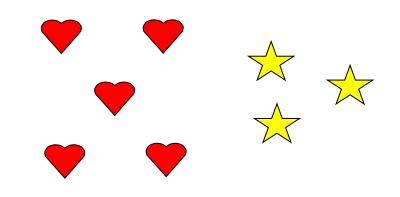
addend

$$5 + 3 + 2 = 10$$
addends

Any number being added.

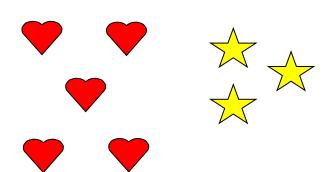
additive comparison

additive comparison



How many more hearts than stars are there?

additive comparison

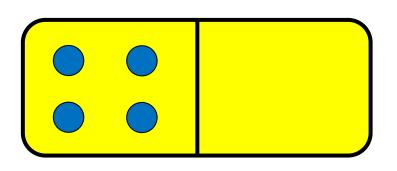


Problems that ask how much more (or less) one amount is than another.

How many more hearts than stars are there?

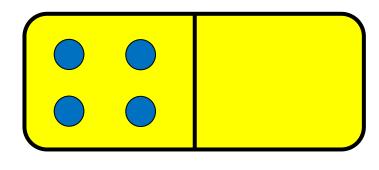
Additive Identity Property of 0

Additive Identity Property of 0



$$4 + 0 = 4$$

Additive Identity Property of 0



When you add zero to a number, the sum is that same number.

$$4 + 0 = 4$$

algorithm

algorithm

```
\begin{array}{c} \mathbf{24} \\ \mathbf{x} \quad \mathbf{3} \\ \mathbf{12} \\ \mathbf{+60} \\ \mathbf{72} \\ \mathbf{Add \ the \ partial \ products.} \end{array}
```

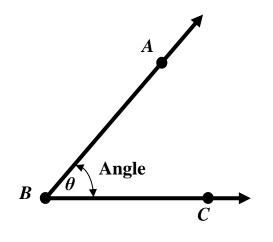
```
algorithm
```

```
\frac{\mathbf{X} \cdot \mathbf{3}}{12}
\frac{\mathbf{X} \cdot \mathbf{3}}{12}
Multiply the ones. 3 \times 4 = 12
\frac{\mathbf{4} \cdot \mathbf{60}}{12}
Multiply the tens. 3 \times 20 = 60
Add the partial products.
```

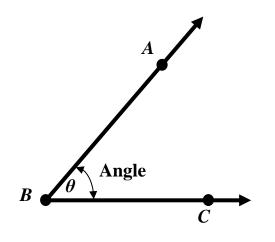
A step-by-step method for computing.

angle

angle



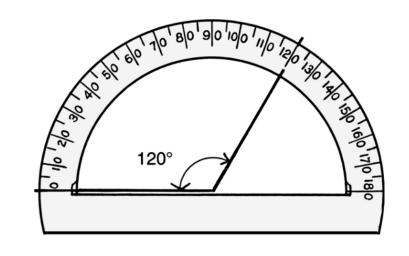
angle



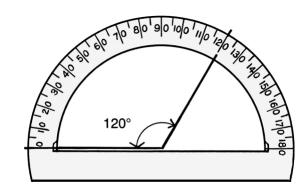
Two rays that share an endpoint.

angle measure

angle measure



angle measure

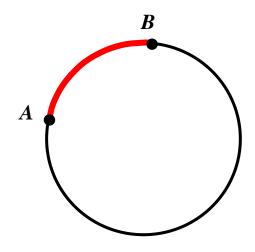


The measure of the size of an angle. It tells how far one side is turned from the other side.

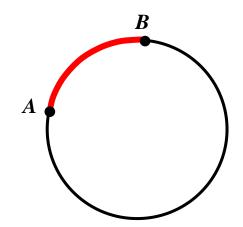
A one degree angle turns through 1/360 of a full circle.

arc

arc



arc

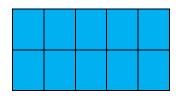


Part of a circle's curve between any two of its points.

area

area

2 rows of 5 = 10 square units or $2 \times 5 = 10$ square units



2 rows of 5 = 10 square units or $2 \times 5 = 10$ square units

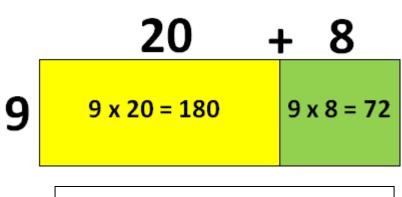
area



The measure, in square units, of the inside of a plane figure.

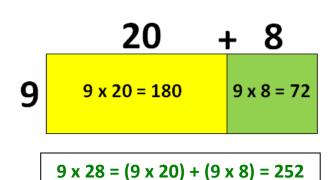
area model

area model



 $9 \times 28 = (9 \times 20) + (9 \times 8) = 252$

area model



A model of multiplication that shows each place value product.

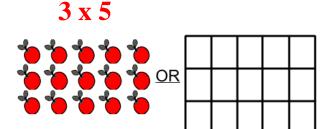
array

array

3 rows of 5
3 x 5

OR

array



3 rows of 5

An arrangement of objects in equal rows.

Associative Property of Addition

Associative Property of Addition

$$(5+7)+3=5+(7+3)$$

 $12+3=5+10$
 $15=15$

Associative Property of Addition

$$(5+7)+3=5+(7+3)$$

 $12+3=5+10$
 $15=15$

Changing the grouping of three or more addends does not change the sum.

Associative Property of Multiplication

Associative Property of Multiplication

$$(5 \times 7) \times 3 = 5 \times (7 \times 3)$$

 $35 \times 3 = 5 \times 21$
 $105 = 105$

Associative Property of Multiplication

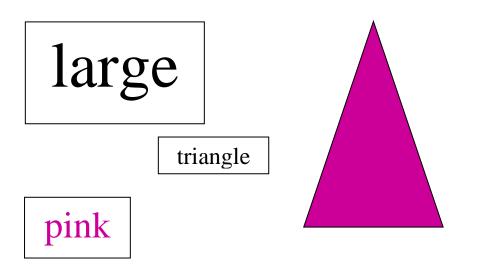
$$(5 \times 7) \times 3 = 5 \times (7 \times 3)$$

 $35 \times 3 = 5 \times 21$
 $105 = 105$

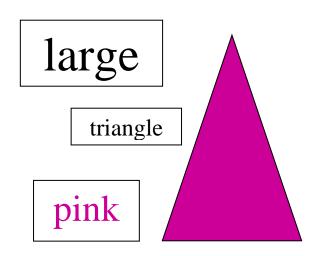
Changing the grouping of three or more factors does not change the product.

attribute

attribute



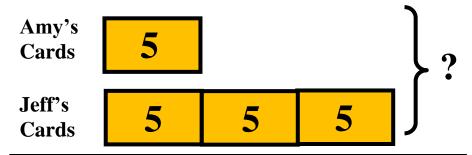
attribute



A characteristic of an object, such as color, shape, size, etc.

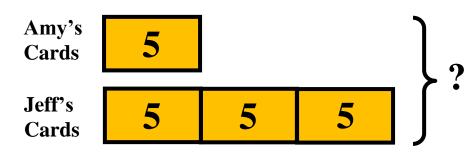
bar model

bar model



Amy had 5 baseball cards. Jeff had 3 times as many cards as Amy. How many baseball cards did they have altogether?

bar model

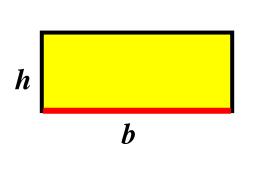


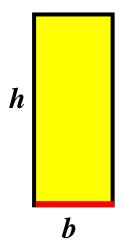
Amy had 5 baseball cards. Jeff had 3 times as many cards as Amy. How many baseball cards did they have altogether?

A model that
uses bars to
represent known
and unknown
quantities and
the relationship
between these
quantities.

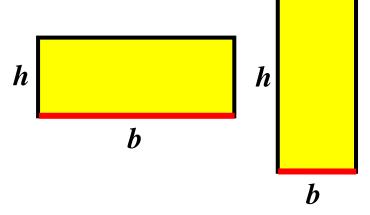
base

base





base



Any side of a plane figure. Usually thought of as a side where the figure "sits."

base-ten numeral form

base-ten numeral form

12,345

3 is in the hundreds place. It has a value of 3 hundreds or 300.

base-ten numeral form 12,345

3 is in the hundreds place. It has a value of 3 hundreds or 300. A common way of writing a number using digits.
The value of a numeral depends on where it appears in the number.

(also known as standard form)

base-ten numerals

base-ten numerals

0 1 2 3 4
5 6 7 8 9

base-ten 01234 numerals 56789 Any of the symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, or 9. The symbols can represent any amount based on a place value system of grouping by tens. (also known as digits)

benchmark

benchmark



You can walk 1 mile in about 20 minutes.

benchmark



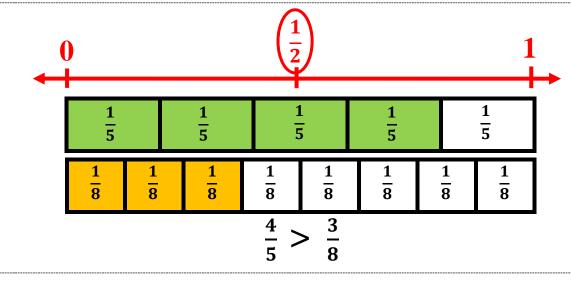
A known size or amount that can be used as a reference to help understand a different size or amount.

A benchmark can be used to estimate measurement.

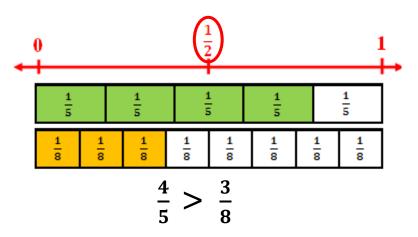
You can walk 1 mile in about 20 minutes.

benchmark fractions

benchmark fractions



benchmark fractions



Fractions that are commonly used for estimation.

A benchmark fraction helps you compare two fractions.

capacity

capacity



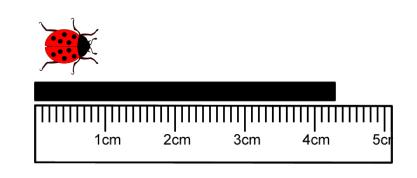
capacity



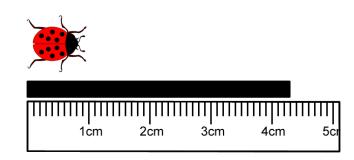
Capacity refers to the amount of liquid a container can hold.

centimeter (cm)

centimeter (cm)



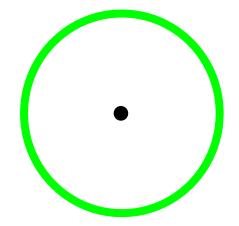
centimeter (cm)



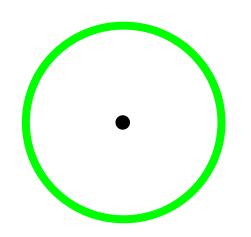
A metric unit of length equal to 0.01 of a meter.

circle

circle



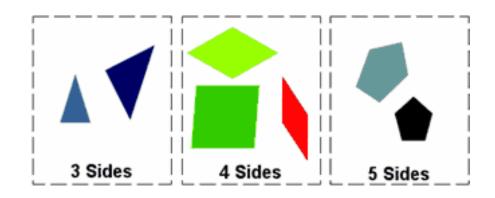
circle



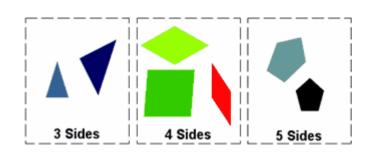
A plane figure with all points the same distance from a fixed point called a center.

classify

classify



classify



To sort into categories or to arrange into groups by attributes.

clockwise

clockwise



clockwise



The same direction that the hands on a clock move.

common denominator

common denominator

12 is a common denominator for
$$\frac{2}{3}$$
 and $\frac{3}{4}$

common denominator

12 is a common denominator for
$$\frac{2}{3}$$
 and $\frac{3}{4}$

For two or more fractions, a common denominator is a common multiple of the denominators.

common factor

common factor

Common Factors of 12 and 18: 1, 2, 3, 6

common factor

Common Factors of 12 and 18: 1, 2, 3, 6

Any common factor of two or more numbers.

common multiple

common multiple

```
4, 8, 12, 16, 20, 24, 28, 32, 36...
6, 12, 18, 24, 30, 36, 42...
```

Common Multiples of 4 and 6: 12, 24, 36...

common multiple

```
4, 8, 12, 16, 20, 24, 28, 32, 36...
6, 12, 18, 24, 30, 36, 42...
```

Common Multiples of 4 and 6: 12, 24, 36...

Any common multiple of two or more numbers.

common numerator

common numerator

4 is a common numerator for

 $\frac{4}{5}$ and $\frac{2}{3}$

common numerator

4 is a common numerator for

 $\frac{4}{5}$ and $\frac{2}{3}$

For two or more fractions, a common numerator is a common multiple of the numerators.

Commutative Property of Addition

Commutative Property of Addition

$$3 + 2 = 2 + 3$$
 $a + b = b + a$

Commutative Property of Addition

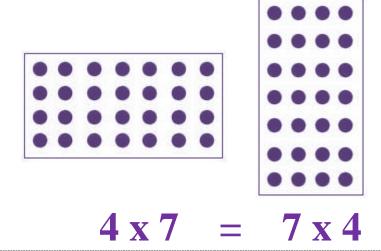
$$3 + 2 = 2 + 3$$

$$a + b = b + a$$

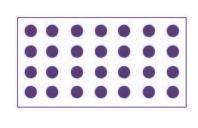
Changing the order of the addends does not change the sum.

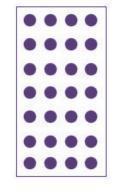
Commutative Property of Multiplication

Commutative Property of Multiplication



Commutative Property of Multiplication



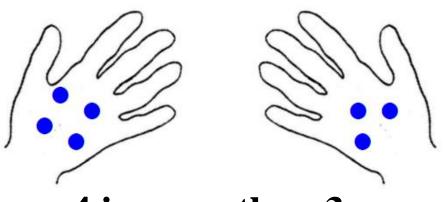


 $4 \times 7 = 7 \times 4$

Changing the order of the factors does not change the product.

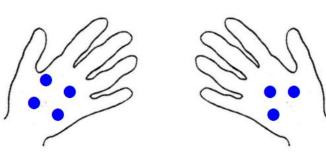
compare

compare



4 is more than 3

compare



4 is more than 3

To decide if one number is greater than, less than, or equal to.

compatible numbers

compatible numbers

$$\begin{array}{c} 57 \longrightarrow 60 \\ \underline{\times 23} \longrightarrow \underline{\times 25} \end{array}$$

compatible numbers

$$\begin{array}{c}
57 \longrightarrow 60 \\
x 23 \longrightarrow x 25
\end{array}$$

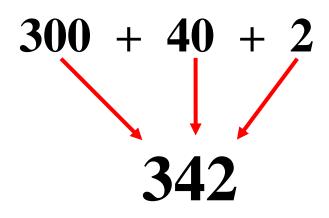
Numbers that are easy to compute mentally and are close in value to the actual numbers.

Compatible numbers can be

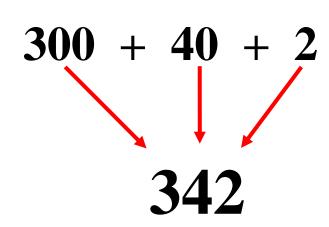
used when estimating.

compose

compose



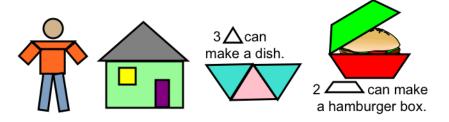
compose



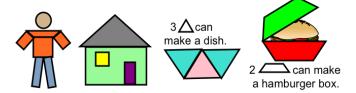
To put together smaller numbers to make larger numbers.

compose

compose



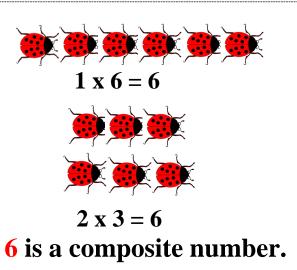
compose



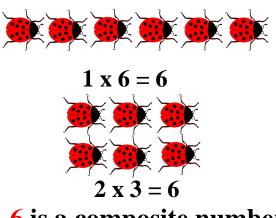
To put together components or basic elements.

composite number

composite number



composite number

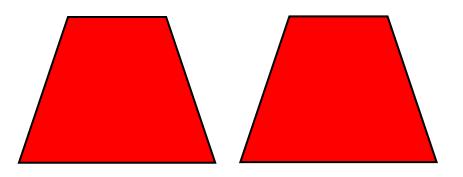


6 is a composite number.

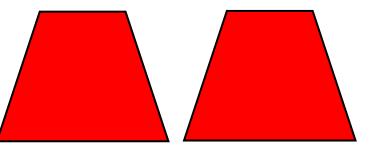
A number greater than 0 that has more than two different factors.

congruent

congruent



congruent



Having exactly the same size and shape.

counterclockwise

counterclockwise



counterclockwise



The opposite direction that the hands move on a clock.

counting number

counting number



counting number



A whole number that can be used to count a set of objects.

Counting numbers do not include 0.

(e.g., 1, 2, 3, 4...)

cup (c)

cup (c)



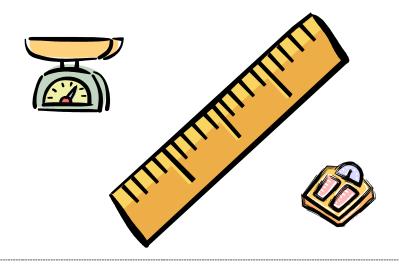
cup (c)



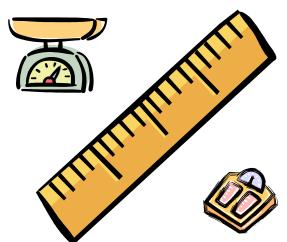
A customary unit of capacity. 1 cup = 8 fluid ounces

customary system

customary system



customary system



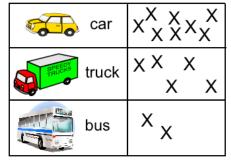
A system of measurement used in the U.S. The system includes units for measuring length, capacity, and weight.

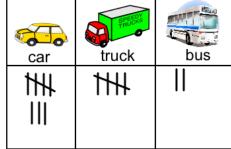
data

data collecting

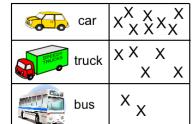
data

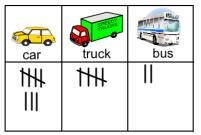






data





A collection of information gathered for a purpose.

Data may be in the form of either words or numbers.

day

day



day



The length of time it takes the Earth to make a complete rotation.

24 hours = 1 day

decimal

decimal

\$29.45 53.0 0.02

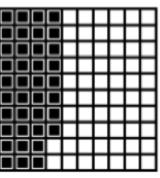
decimal

\$29.45 53.0 0.02

A number with one or more digits to the right of a decimal point.

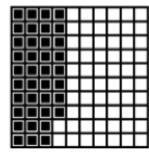
decimal fraction

decimal fraction



$$0.38 = \frac{38}{100}$$

decimal fraction



$$0.38 = \frac{38}{100}$$

A fractional number with a denominator of 10 or a power of 10. It can be written with a decimal point.

decimal point

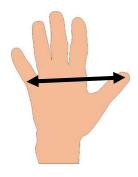
decimal point

decimal point

A dot (.) separating the whole number from the fraction in decimal notation.

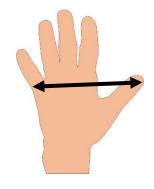
decimeter

decimeter



A hand span is about 1 decimeter.

decimeter

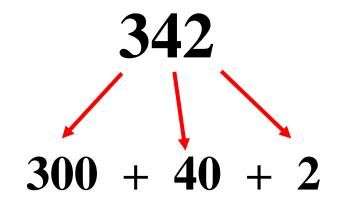


A metric unit of length. 1 decimeter = 0.1 meter 10 decimeters = 1 meter

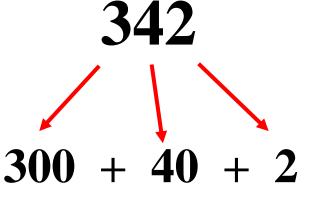
A hand span is about 1 decimeter.

decompose

decompose



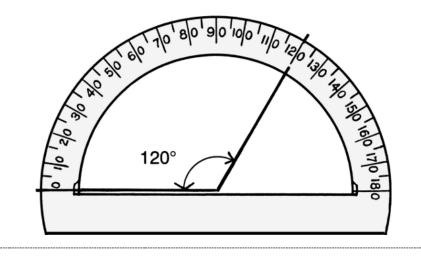
decompose



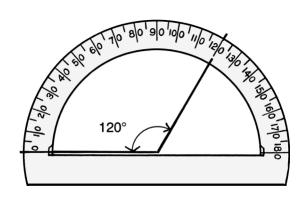
To separate a number into 2 or more parts.

degree (angle measure)

degree (angle measure)



 $degree \hspace{0.1cm} \text{\tiny (angle measure)}$



A unit for measuring angles. It is based on dividing one complete circle into 360 equal parts.

denominator

denominator

- Parts in all
- Whole
- Set
- Total

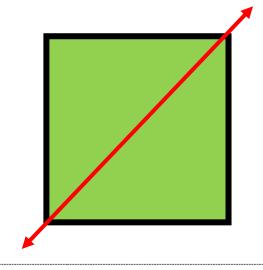
denominator

 $\begin{array}{c|c}
\mathbf{1} & & & & \\
\hline
\mathbf{3} & & & & \\
\hline
\mathbf{5} & & & & \\
\hline
\mathbf{1} & & & & \\
\hline
\mathbf{2} & & & & \\
\hline
\mathbf{3} & & & & \\
\hline
\mathbf{7} & & & & \\
\hline
\mathbf{1} & & & & \\
\hline
\mathbf{3} & & & & \\
\hline
\mathbf{7} & & & & \\
\hline
\mathbf{1} & & & & \\
\hline
\mathbf{2} & & & & \\
\hline
\mathbf{3} & & & & \\
\hline
\mathbf{7} & & & \\
\hline
\mathbf{7} & & & & \\$

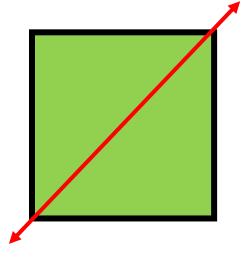
The quantity below the line in a fraction. It tells how many equal parts are in the whole.

diagonal

diagonal



diagonal



A line that goes through vertices of a polygon that are not next to each other.

difference

difference

difference

The amount that remains after one quantity is subtracted from another.

digit

digit

0 1 2 3 4
5 6 7 8 9

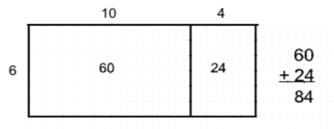
digit

0 1 2 3 4
5 6 7 8 9

Any of the symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, or 9. (also known as base-ten numerals)

Distributive Property

Distributive Property



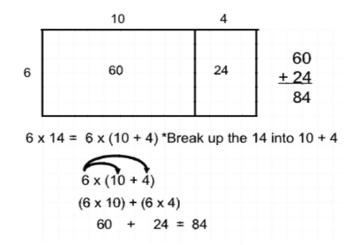
 $6 \times 14 = 6 \times (10 + 4)$ *Break up the 14 into 10 + 4

$$6 \times (10 + 4)$$

$$(6 \times 10) + (6 \times 4)$$

$$60 + 24 = 84$$

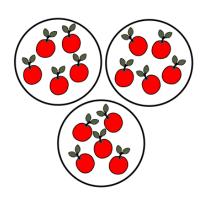
Distributive Property



When one of the factors of a product is a sum, multiplying each addend before adding does not change the product.

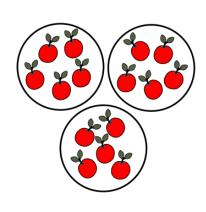
divide

divide



$$15 \div 3 = 5$$

divide



 $15 \div 3 = 5$

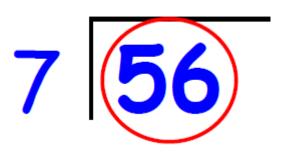
To separate into equal groups and find the number in each group or the number of groups.

dividend

dividend



dividend



A number that is divided by another number.

divisible

divisible



8 is divisible by 2 because there is no remainder.

$$8 \div 2 = 4$$

divisible



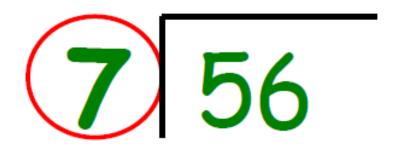
8 is divisible by 2 because there is no remainder.

$$8 \div 2 = 4$$

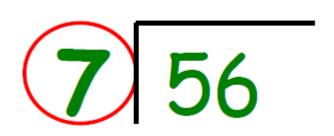
A number is divisible by another number if the quotient is a counting number without a remainder.

divisor

divisor



divisor



The number by which another number is divided.

elapsed time

elapsed time



elapsed time



The amount of time that has passed. (also known as time interval)

endpoint

endpoint



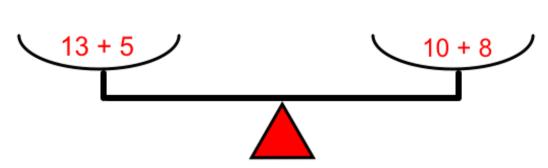
endpoint



A point at either end of a line segment, or a point at one end of a ray.

equal

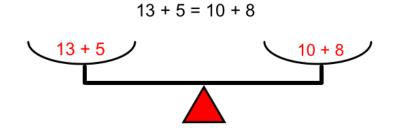




13 + 5 = 10 + 8

These expressions balance the scale because they are equal.

equal

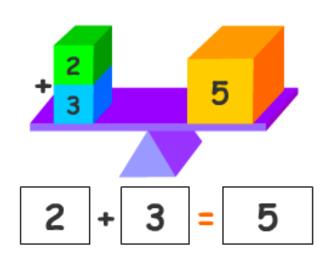


Having the same value.

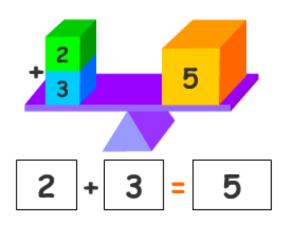
These expressions balance the scale because they are equal.

equation

equation



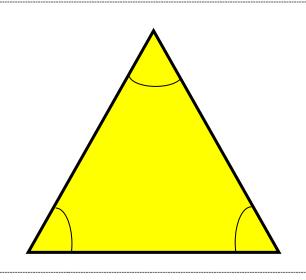
equation



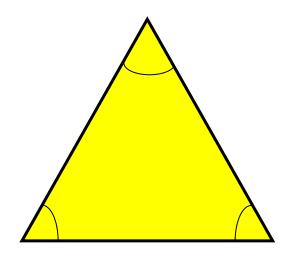
A mathematical sentence with an equal sign. The amount on one side of the equal sign has the same value as the amount on the other side.

equiangular triangle

equiangular triangle



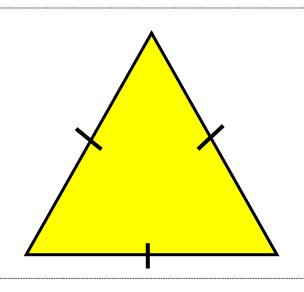
equiangular triangle



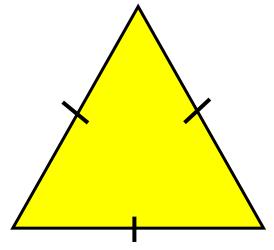
A triangle with all equal angles (60°).

equilateral triangle

equilateral triangle



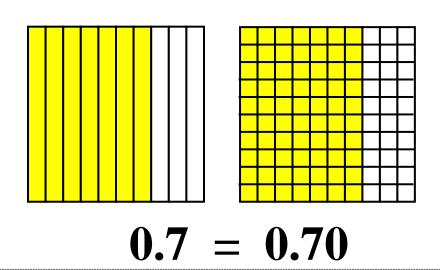
equilateral triangle



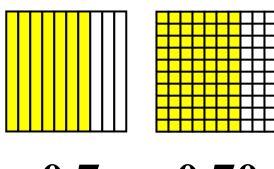
A triangle with all sides the same length.

equivalent decimals

equivalent decimals



equivalent decimals



0.7 = 0.70

Decimals that have the same value.

equivalent fractions

equivalent fractions



equivalent fractions



Fractions that have the same value.

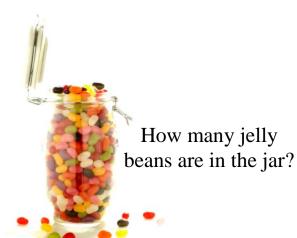
estimate

estimate



How many jelly beans are in the jar?

estimate



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

expanded form

expanded form

$$263 = 200 + 60 + 3$$

expanded form

$$263 = 200 + 60 + 3$$

A way to write numbers that shows the place value of each digit.

expression

expression

$$n+4$$

expression n+4

$$n+4$$

A mathematical phrase without an equal sign.

fact family

fact family

Fact Family for 3, 5, 15

$$3 \times 5 = 15$$
 $15 \div 5 = 3$
 $5 \times 3 = 15$ $15 \div 3 = 5$

Fact Family for 3, 5, 15

fact family

$$3 \times 5 = 15$$
 $15 \div 5 = 3$
 $5 \times 3 = 15$ $15 \div 3 = 5$

A group of related facts that use the same numbers.
(also known as related facts)

factor

factor

$$2 \times 6 = 12$$
factors

factor

$$2 \times 6 = 12$$
factors

The whole numbers that are multiplied to get a product.

factor pairs

factor pairs

$$2 \times 3 = 6$$

$$1 \times 6 = 6$$

The factor pairs for 6 are:
2 and 3
1 and 6

$$2 \times 3 = 6$$

$$1 \times 6 = 6$$

The factor pairs for 6 are:

2 and 3

1 and 6

A set of two whole numbers that when multiplied will result in a given product.

fluid ounce

fluid ounce



fluid ounce



A customary unit of capacity. 8 fluid ounces = 1 cup

foot (ft)

foot (ft)

12 inches = 1 foot



foot (ft)

12 inches = 1 foot



A customary unit of length.

1 foot = 12 inches

formula

formula

To find the area of any rectangle, multiply its length by its width. This rule can be written as an equation:

$$A = l \times w$$

formula

To find the area of any rectangle, multiply its length by its width.

This rule can be written as an equation:

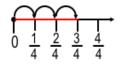
$$A = l \times w$$

A rule that is written as an equation.

fraction

fraction

Measurement Model



Bar Diagram

Set Model

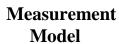


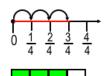
Area Model



(thickened number line)

fraction





Bar Diagram (thickened number line)

Set Model



Area Model



A way to describe a part of a whole or a part of a group by using equal parts.

fraction greater than one

fraction greater than one

greater than denominator

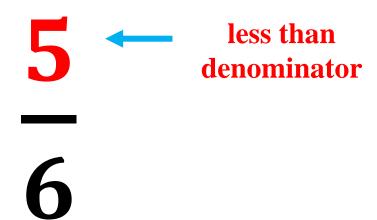
6

fraction greater than one greater than denominator

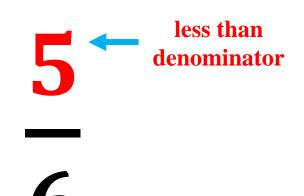
A fraction with the numerator greater than the denominator.

fraction less than one

fraction less than one



fraction less than one



A fraction with the numerator less than the denominator.

gallon (gal)

gallon (gal)



gallon (gal)



A customary unit of capacity.

1 gallon = 4 quarts

gram (g)

gram (g)

The mass of a paperclip is about 1 gram.



The mass of a paperclip is about 1 gram.

gram (g)

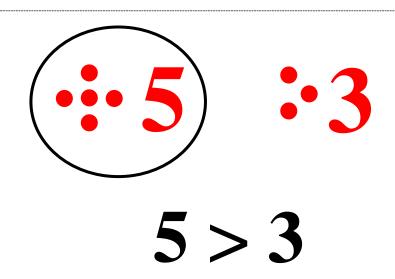


The standard unit of mass in the metric system.

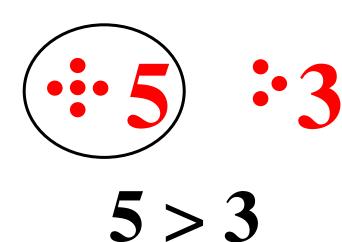
1,000 grams = 1 kilogram

greater than

greater than



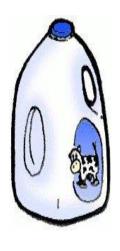
greater than



Greater than is used to compare two numbers when the first number is larger than the second number.

half gallon

half gallon



half gallon

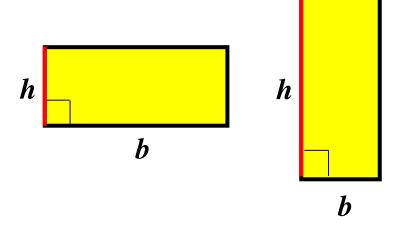


A customary unit of capacity.

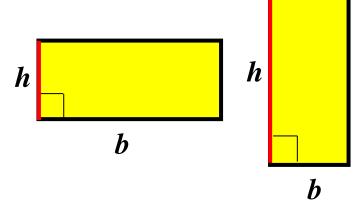
$$\frac{1}{2}$$
 gallon = 2 quarts

height

height



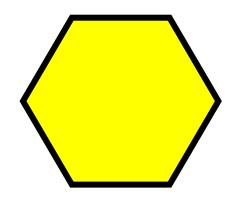
height



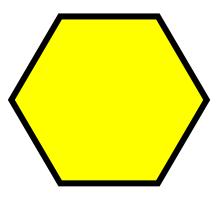
A perpendicular line segment from the base to the top of the figure.

hexagon

hexagon



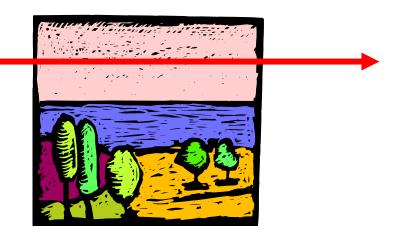
hexagon



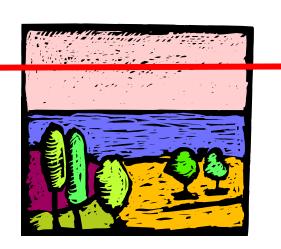
A polygon with six sides.

horizontal

horizontal



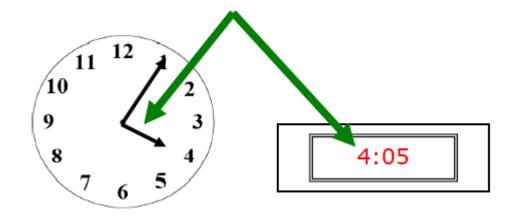
horizontal



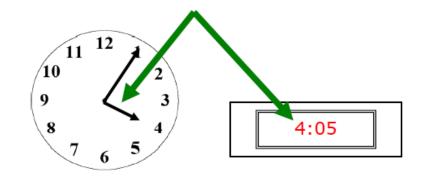
Parallel to the horizon. Horizontal lines go from left to right.

hour (hr)

hour (hr)



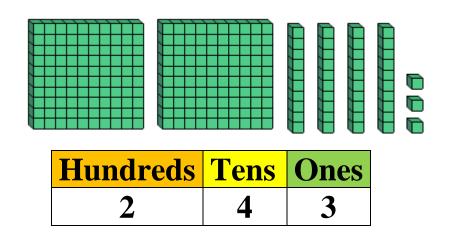
hour (hr)



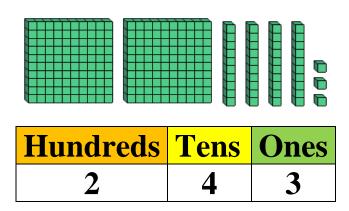
A unit of time. 1 hour = 60 minutes 24 hours = 1 day

hundreds

hundreds



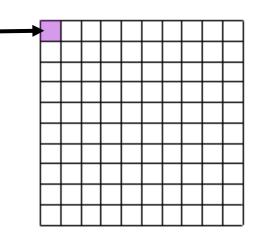
hundreds



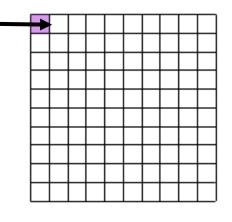
The value of a digit that is the third position from the right when describing whole number place value.

hundredth

hundredth



hundredth



One of the equal parts when a whole is divided into 100 equal parts.

hundredths

hundredths

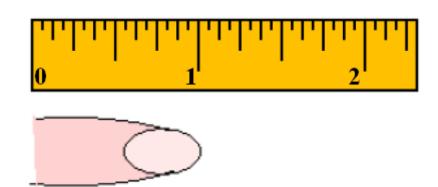
hundredths

4.38

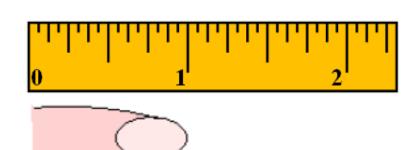
In the decimal numeration system, hundredths is the name of the next place to the right of tenths.

inch (in)

inch (in)



inch (in)

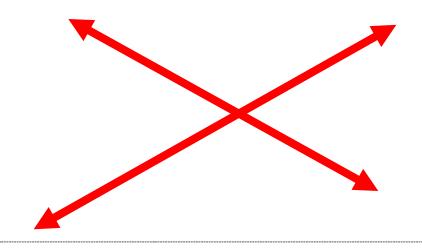


A customary unit of length.

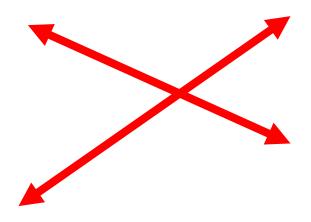
12 inches = 1 foot

intersecting lines

intersecting lines



intersecting lines



Lines that cross at a point.

inverse operations

inverse operations

Multiplication and division are inverse operations.

inverse operations Multiplication and division are inverse operations.

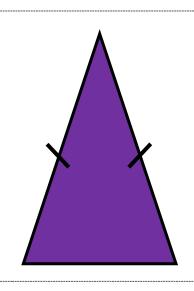
$$8 \times 5 = 40$$

 $40 \div 5 = 8$

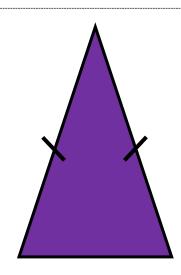
Operations that undo each other.

isoscles triangle

isosceles triangle



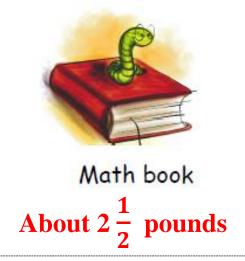
isosceles triangle

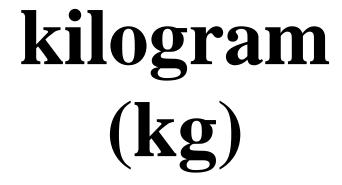


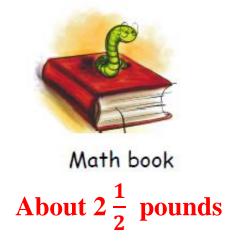
A triangle that has exactly two equal sides.

kilogram (kg)

kilogram (kg)



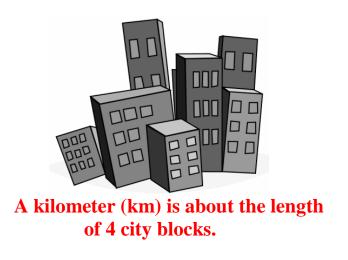




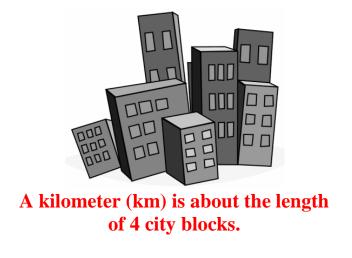
A metric unit of mass equal to 1000 grams.

kilometer (km)

kilometer (km)



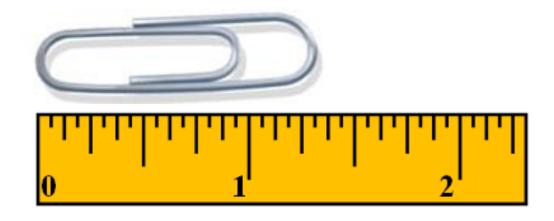
kilometer (km)



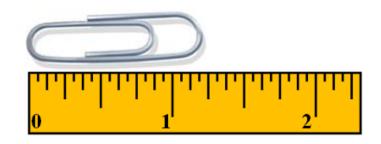
A metric unit of length equal to 1000 meters.

length

length



length

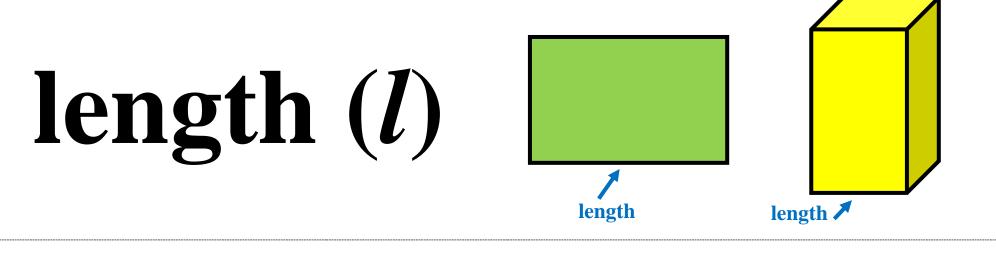


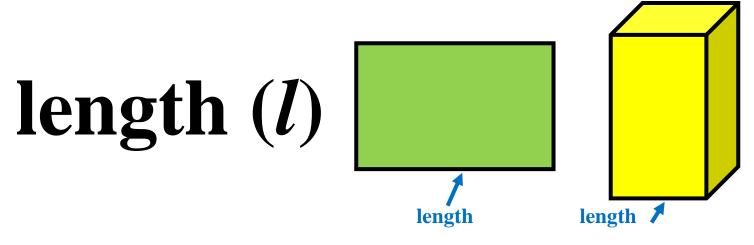
How long something is.

The distance from one point to another.

Length is measured in units such as inches, feet, centimeters, etc.

length (l)

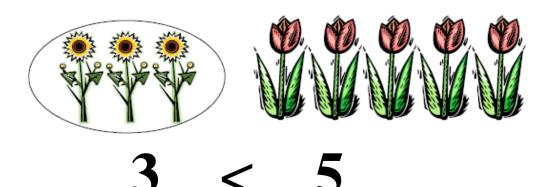




One dimension of a 2-dimensional or 3-dimensional figure.

less than

less than



less than



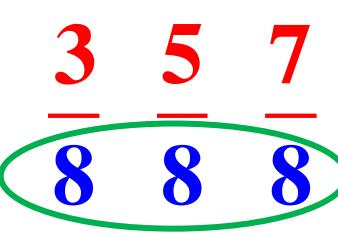
S < 5

Less than is used to compare two numbers when the first number is smaller than the second number.

like denominators

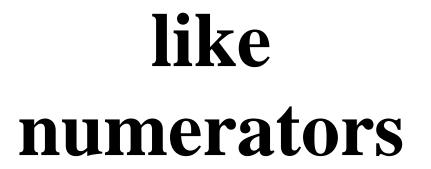


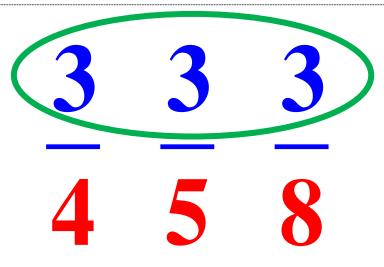
$$\frac{3}{8}$$
 $\frac{5}{8}$ $\frac{7}{8}$



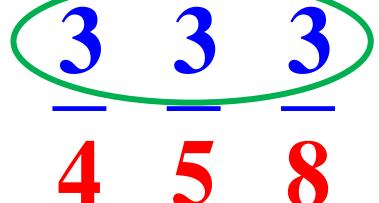
Denominators in two or more fractions that are the same.

like numerators





like numerators



Numerators in two or more fractions that are the same.

line

line



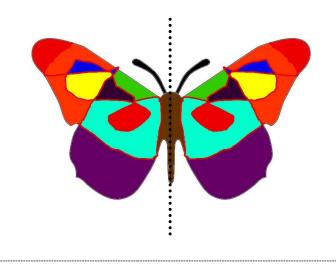
line



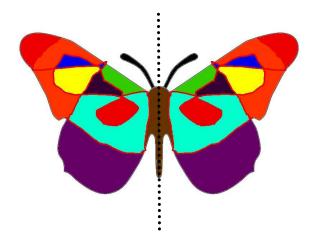
A set of connected points continuing without end in both directions.

line of symmetry

line of symmetry



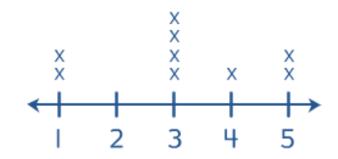
line of symmetry



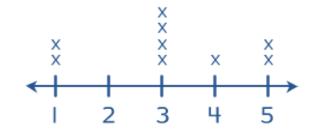
A line that divides a figure into two congruent halves that are mirror images of each other.

line plot

line plot



line plot



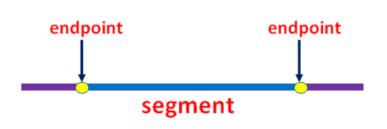
A diagram showing frequency of data on a number line.

line segment

line segment



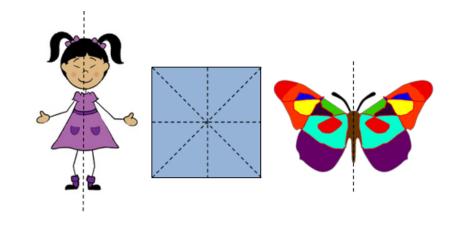
line segment



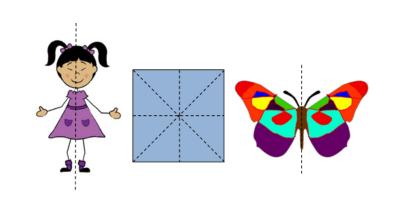
A part of a line with two endpoints.

line-symmetric figures

line-symmetric figures



linesymmetric figures

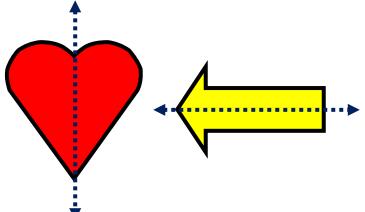


Figures that can be folded in half and its two parts match exactly.

line symmetry



line symmetry



What a figure has if it can be folded in half and its two parts match exactly.

liter (L)

liter (L)

large bottle of soda or bottle of water



1,000 mL = 1 L

liter (L)

large bottle of soda or bottle of water



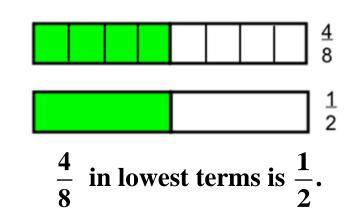
1,000 mL = 1 L

The basic unit of capacity in the metric system.

1 liter = 1,000 milliliters

lowest terms

lowest terms



lowest terms



 $\frac{4}{8}$ in lowest terms is $\frac{1}{2}$.

When a fraction is expressed with the fewest possible pieces, it is in lowest terms. (also known as simplest form)

