#### English 4<sup>th</sup> Grade M-Z Vocabulary Cards and Word Walls

**Revised: 4/13/18** 

#### **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:

<u>Algebra to Go</u>, Great Source, 2000. ISBN: 0-669-46151-8 <u>Math on Call</u>, Great Source, 2004. ISBN-13: 978-0-669-50819-2 <u>Math at Hand</u>, Great Source, 1999. ISBN: 0-669-46922 <u>Math to Know</u>, Great Source, 2000. ISBN: 0-669-47153-4 <u>Illustrated Dictionary of Math</u>, Usborne Publishing Ltd., 2003. ISBN: 0-7945-0662-3 <u>Math Dictionary</u>, Eula Ewing Monroe, Boyds Mills Press, 2006. ISBN: 13: 978-1-59078-413-6 <u>Oxford Illustrated Math Dictionary</u>, 2012. ISBN: 978-0-19-407128-4 <u>Student Reference Books</u>, Everyday Mathematics, 2007. Houghton-Mifflin eGlossary, http://www.eduplace.com Interactive Math Dictionary, http://www.amathsdictionaryforkids.com/

### mass









The amount of matter in an object. Usually measured by comparing with an object of known mass. While gravity influences weight, it does not affect mass.

# meter (m)

### meter (m)



A baseball bat is *about* 1 meter long.



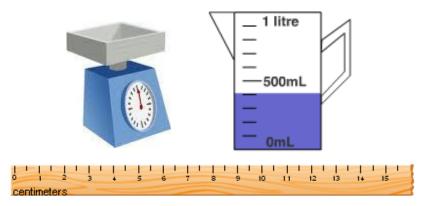


A standard unit of length in the metric system.

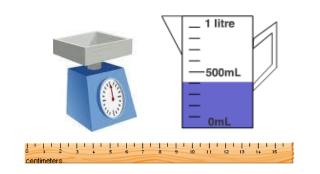
A baseball bat is *about* 1 meter long.

# metric system

### metric system



metric system



A system of measurement based on tens. The basic unit of capacity is the liter. The basic unit of length is the meter. The basic unit of mass is the gram.

### mile





Two times around the average roller coaster is *about* 1 mile.

### mile



A customary unit of length. 1 mile = 5,280 feet

Two times around the average roller coaster is *about* 1 mile.

# milliliter (mL)

### milliliter (mL)

This holds about 10 drops or 1 milliliter.



This holds about 10 drops or 1 milliliter.

milliliter (mL)



A metric unit of capacity. 1,000 milliliters = 1 liter

# millimeter (mm)

### millimeter (mm)



The dot on a ladybug is *about* 1 millimeter wide.

### millimeter



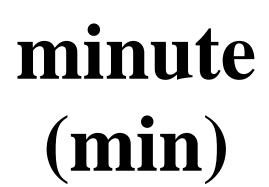


The dot on a ladybug is *about* 1 millimeter wide. A metric unit of length. 1,000 millimeters = 1 meter

# minute (min)

# minute (min)





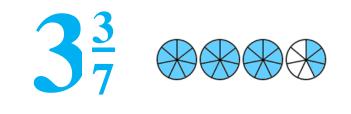


A unit used to measure a short amount of time; there are 60 minutes in one hour.

# mixed number

### mixed 3<sup>3</sup>/<sub>7</sub> \*\*\*\*

### mixed number



A number that has a counting number and a fraction.

### month

September								
Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.		
1	2	3	4	5	6	7		
8	9	10	11	12	13	14		
15	16	17	18	19	20	21		
22	23	24	25	26	27	28		
29	30							

September is the ninth month of the year.

	Sun.	Mon.	Tues.
	1	2	3
	1 2	10	
month	15	16	17
	22	23	24
	29	30	

A length of time equal to 28, 30, or 31 days. 12 months = 1 year

#### September is the ninth month of the year.

September

Wed. Thurs.

Fri.

Sat.

# multiple

### multiple



3, 6, 9, 12, 15, 18, 21 ...

multiple



The product of a whole number and any other whole number.

3, 6, 9, 12, 15, 18, 21 ...

### multiplicative comparison

# multiplicative comparison



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

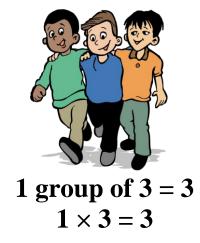
# multiplicative comparison



Amy had 5 baseball cards. Jeff had 3 times as many cards as Amy. How many baseball cards did they have altogether? Compare by asking or telling how many times more one amount is than another. e.g., 3 times as many as

### Multiplicative Identity Property of 1

### Multiplicative Identity Property of 1



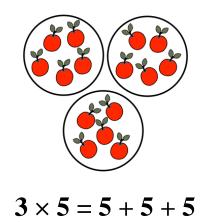
Multiplicative Identity Property of 1



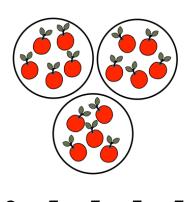
1 group of 3 = 31 × 3 = 3 Multiplying a factor by one gives a product identical to the given factor.

# multiply

### multiply



### multiply



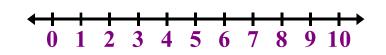
The operation of repeated addition of the same number.

 $3\times 5=5+5+5$ 

### number line

### number 0 1 2 3 4 5 6 7 8 9 10 line

### number line



A diagram that represents numbers as points on a line.

## number name

### number

name

#### The number name of 12,345 is twelve thousand, three hundred forty-five.

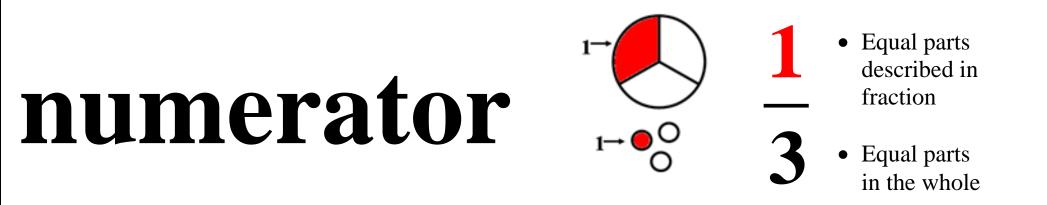
number name

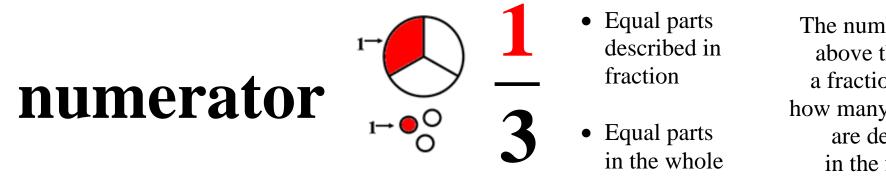
#### The number name of

- 12,345
- is twelve thousand, three hundred forty-five.

A way of using words to write a number. (also known as word form)

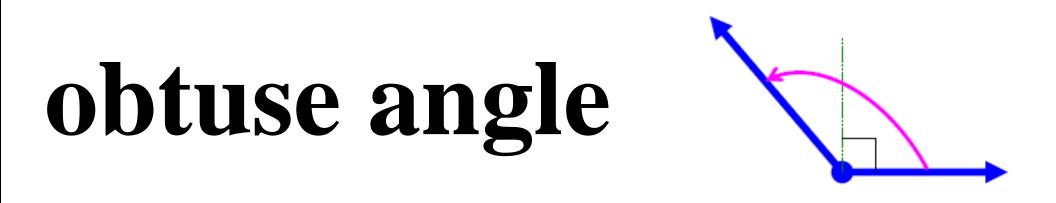
### numerator



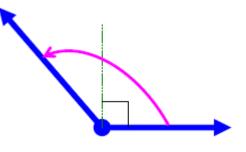


The number written above the line in a fraction. It tells how many equal parts are described in the fraction.

# obtuse angle



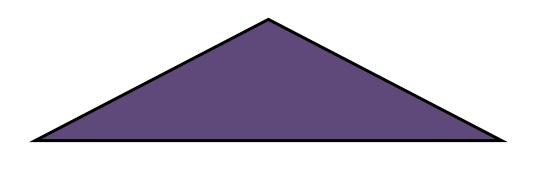




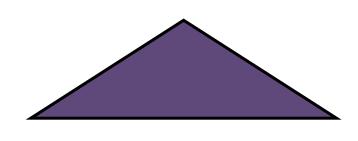
An angle with a measure greater than 90° but less than 180°.

# obtuse triangle

### obtuse triangle



### obtuse triangle

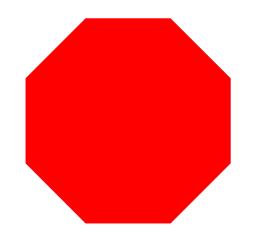


A triangle that contains 1 angle with a measure greater than 90° (obtuse angle) and 2 acute angles.

# octagon

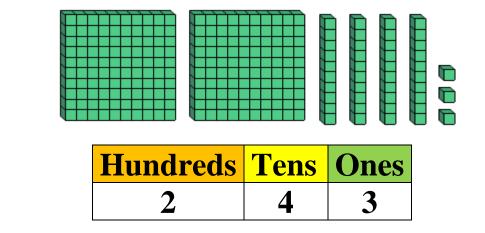




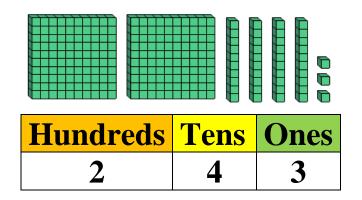


A polygon with 8 sides.

### ones



### ones



The value of a digit that is farthest to the right when describing whole number place value.

#### ones

### order

### order

# $\frac{2}{8}$ $\frac{2}{6}$ $\frac{2}{4}$

In order from least to greatest.

### order

A sequence or arrangement of things. To order fractions, compare two fractions at a time.

In order from least to greatest.

## **Order of Operations**

### Order of Operations

#### **Order of Operations**

- 1. Do operations in parentheses.
- 2. Multiply and divide in order from left to right.
- 3. Add and subtract in order from left to right.

### Order of Operations

#### **Order of Operations**

- 1. Do operations in parentheses.
- 2. Multiply and divide in order from left to right.
- **3. Add and subtract in order from left to right.**

A set of rules that tells the order in which to compute.

# ounce (oz)

### ounce (oz)



A strawberry weighs about 1 ounce.

A customary unit of weight equal to one sixteenth of a pound. 16 ounces = 1 pound

ounce (oz)



A strawberry weighs *about* 1 ounce.

### p.m.



### p.m.

12:00 P.M. noon

3:30 P.M.

half past 3

12:00 P.M.

noon

half past 3

3:30 P.M.

12:00 A.M. midnight



7:45 P.M. a quarter to 8

p.m.



7:45 P.M. 12:00 A.M. a quarter to 8 midnight

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

# parallel lines

### parallel lines



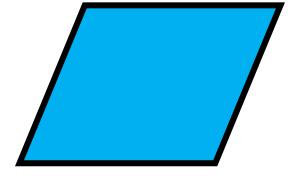
### parallel lines



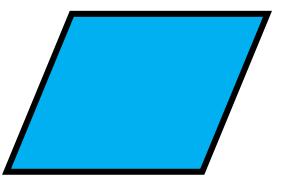
Lines that are always the same distance apart. They do not intersect.

# parallelogram

### parallelogram



### parallelogram



A quadrilateral with 2 pairs of parallel and congruent sides.

# parentheses

# parentheses

 $(2+3) \times 4$  $5 \times 4$ 20

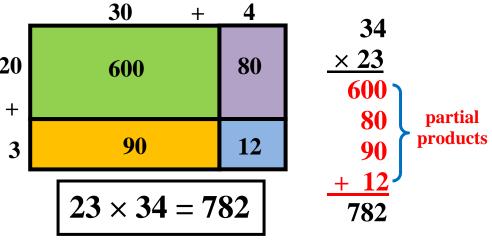
### parentheses

 $(2 + 3) \times 4$ 5 × 4 20

Used in mathematics as grouping symbols for operations. When simplifying an expression, the operations within the parentheses are performed first.

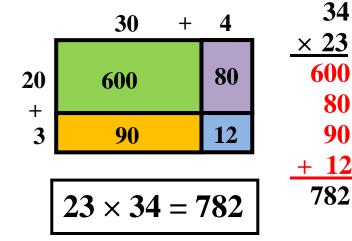
# partial product





partial

partial product



A method of multiplying in which the value of each digit in a factor is multiplied products separately, and then the partial products are added together.

# partial quotient

### partial quotient

6)152 -120 partial 32 quotients 30 Remainder Ouotient

partial quotient  $\begin{array}{c|c}
 \hline 6 & 152 \\
 \underline{-120} & 20 \\
 \hline 32 & 20 \\
 \underline{-30} & 20 \\
 \underline{-30} & 20 \\
 \underline{-30} & 20 \\
 \underline{-30} & 20 \\
 \underline{-5} & 25 \\
 \underline{-5} & 1 \\
 \underline{-5} & 1 \\
 \underline{-5} & 25 \\
 \underline{-5} & 1 \\
 \underline{-5} & 1 \\
 \underline{-5} & 25 \\
 \underline{-5$ 

A method of dividing in which multiples of the divisor are subtracted from the dividend, and then the partial quotients are added together.

# partitive division

(sharing division)

### partitive division

(sharing division)



Justin has 12 balloons. He wants to share them evenly among 3 friends. How many balloons should he give each friend?  $12 \div 3 = 4$ 

### partitive division

(sharing division)



Justin has 12 balloons. He wants to share them evenly among 3 friends. How many balloons should he give each friend?  $12 \div 3 = 4$  A division problem where the number of objects in each group is unknown. *How many in each group?* 

## pattern

#### $1_{+4}$ $5_{+4}$ $9_{+4}$ 13pattern The pattern is all odd numbers. It follows the rule "add 4."

### pattern

 $1_{+4}$   $5_{+4}$   $9_{+4}$  13

The pattern is all odd numbers. It follows the rule "add 4."

A repeating or growing sequence. An ordered set of numbers arranged according to a rule.

## pattern

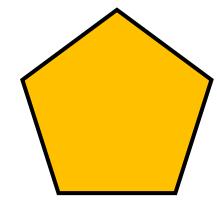
### pattern



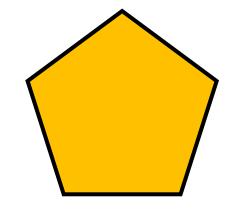
A repeating or growing sequence or design. An ordered set of numbers or shapes arranged according to a rule.

# pentagon





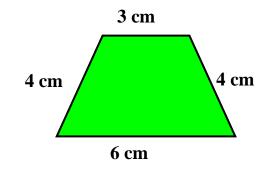
### pentagon

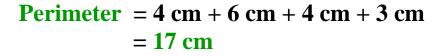


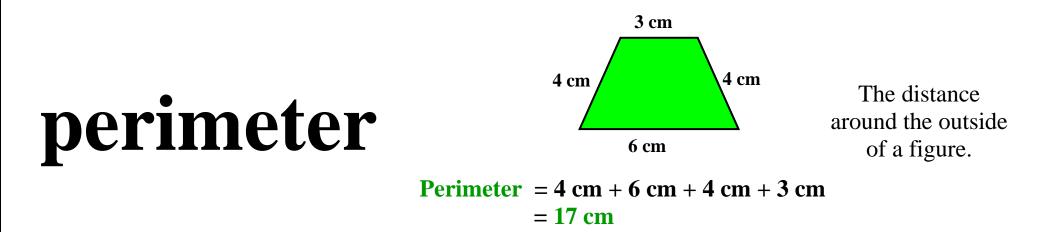
A polygon with 5 sides.

# perimeter







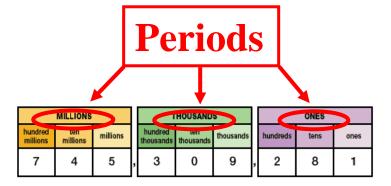


# period

### period

	Periods							
			<b>↓</b>					
MILLIONS			THOUSANDS			ONES		
hundred millions	ten millions	millions	hundred thousands	ten thousands	thousands	hundreds	tens	ones
7	4	5	, 3	0	9	, 2	8	1

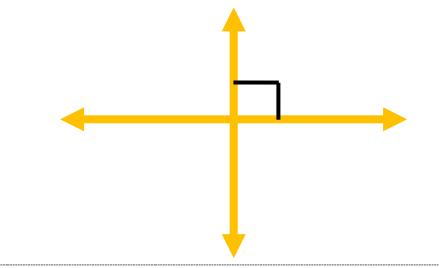
period

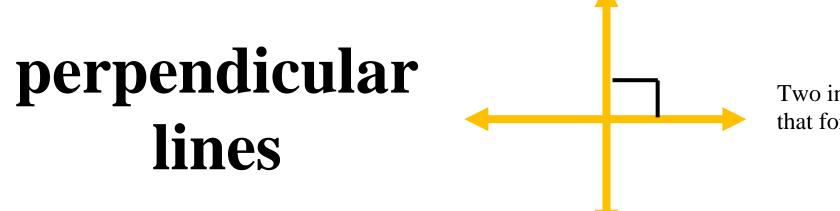


In a large number, periods are groups of 3 digits separated by commas or by spaces.

## perpendicular lines

### perpendicular lines

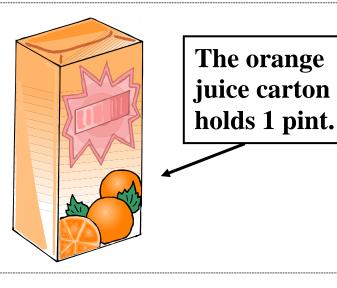


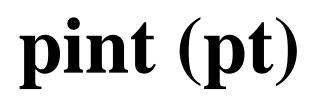


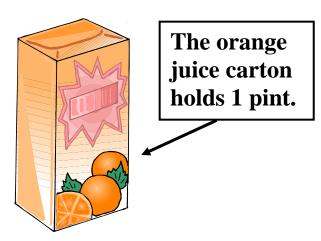
Two intersecting lines that form right angles.

## pint (pt)









A customary unit of capacity. 1 pint = 2 cups

## place value

### place value

MILLIONS				THOUSANDS				ONES			
hundred millions	ten millions	millions		hundred thousands	ten thousands	thousands		hundreds	tens	ones	
7	4	5	,	3	0	9	,	2	8	1	

### place value

MILLIONS				THOUSANDS				ONES		
hundred millions	ten millions	millions		hundred thousands	ten thousands	thousands		hundreds	tens	ones
7	4	5	,	3	0	9	,	2	8	1

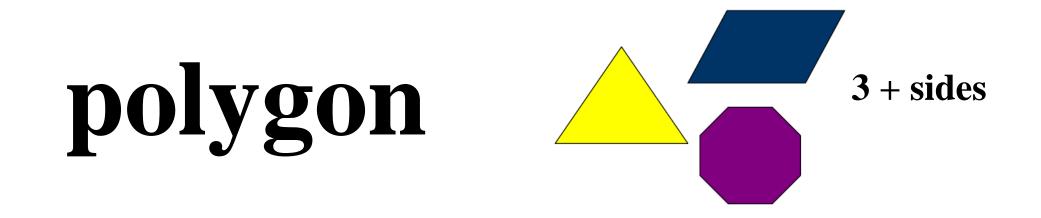
The value of the place of a digit in a number.

## point

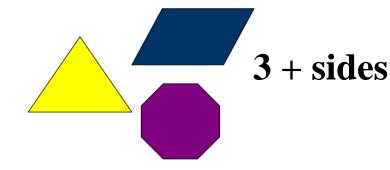




## polygon



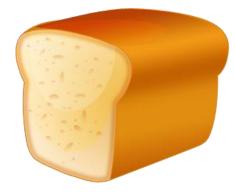




A closed plane figure made by line segments.

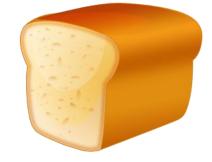
## pound (lb)

## pound (lb)



A loaf of bread weighs *about* 1 pound.

pound (lb)



A customary unit of weight. 1 pound = 16 ounces

A loaf of bread weighs about 1 pound.

## prime number

### prime number



 $1 \times 5 = 5$ 

5 is a prime number.

prime number



 $1 \times 5 = 5$ 

5 is a prime number.

A whole number greater than 0 that has exactly two different factors, 1 and itself.

## product

### product

## $5 \times 3 = 15$

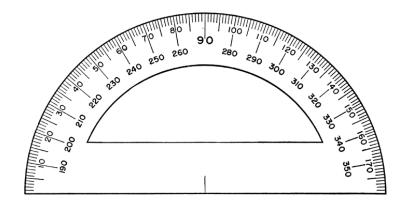
### product

 $5 \times 3 = 15$ 

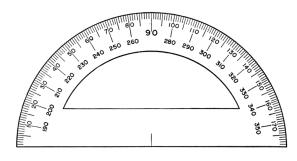
The answer to a multiplication problem.

## protractor

### protractor



### protractor

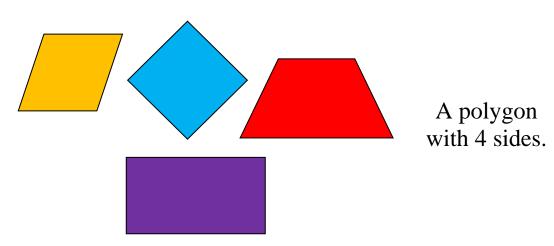


A tool used to measure and draw angles.

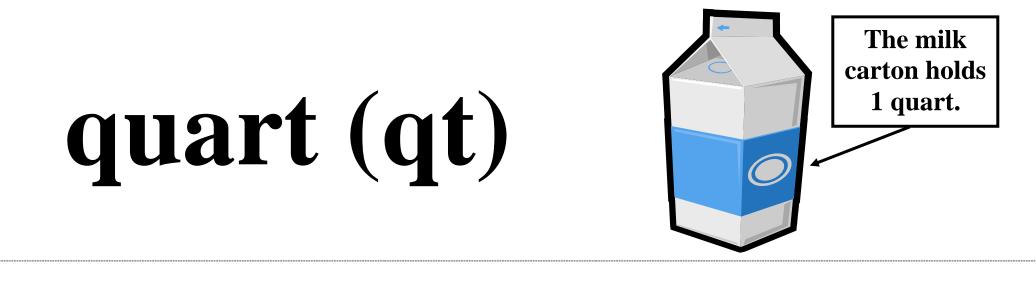
## quadrilateral



### quadrilateral



## quart (qt)



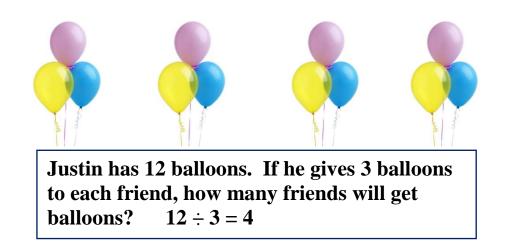
quart (qt) I quart.
A customary unit of capacity. 1 quart = 2 pints or 1 quart = 4 cups

## quotative division

(measurement division)

### quotative division

(measurement division)



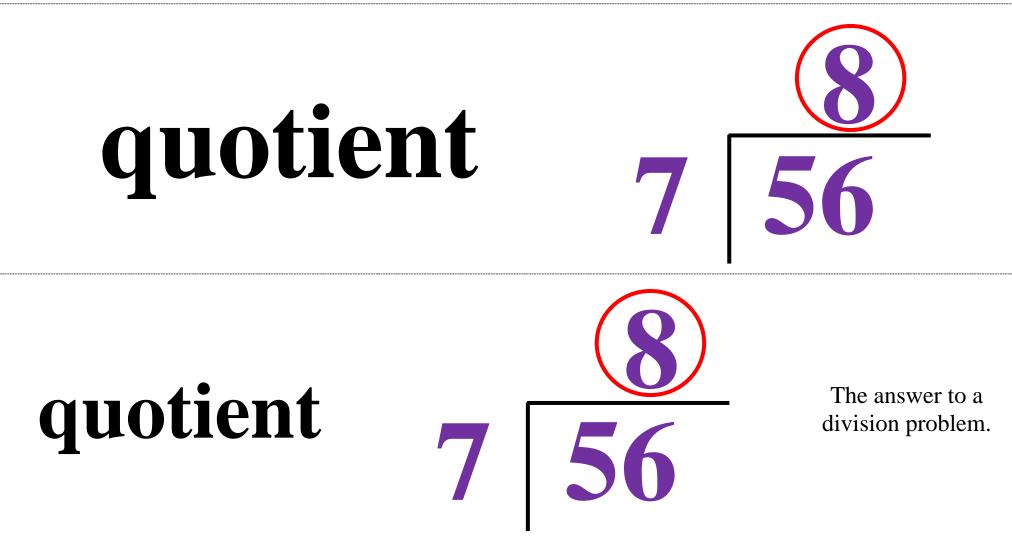
### quotative division

(measurement division)

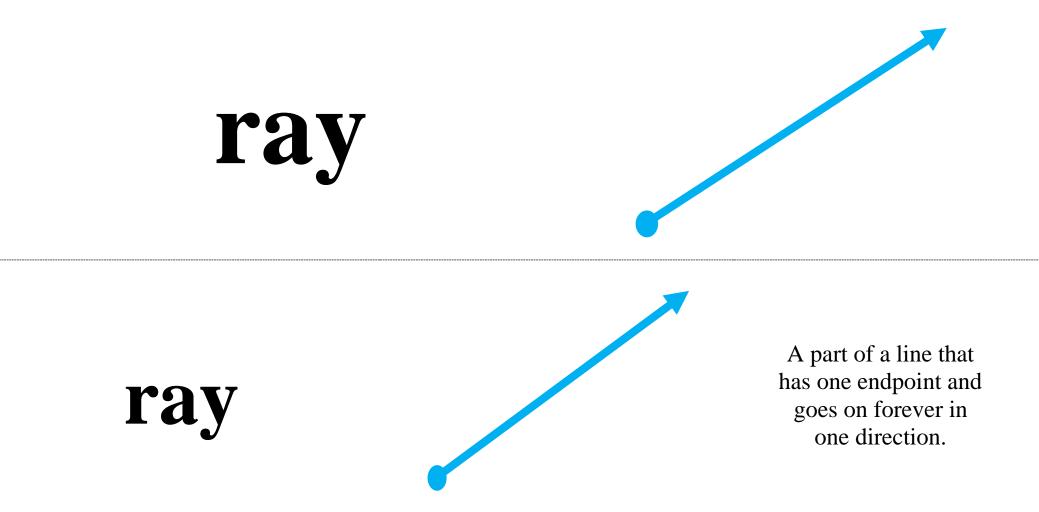


Justin has 12 balloons. If he gives 3 balloons to each friend, how many friends will get balloons?  $12 \div 3 = 4$  A division problem where the number of groups is unknown. *How many groups?* 

## quotient







### reasonableness

### reasonableness

 What is the product of 57 and 34?

 A. 1,938
 C. 5,738

 B. 3,208
 D. 8,698



Use estimation to eliminate unreasonable choices. 60 × 30 =1,800

B, C, and D are not close to 1,800. The answer is A.

#### reasonableness

 What is the product of 57 and 34?

 A. 1,938
 C. 5,738

 B. 3,208
 D. 8,698



Use estimation to eliminate unreasonable choices. 60 × 30 = 1,800

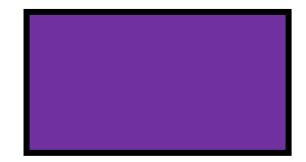
B, C, and D are not close to 1,800. The answer is A. An answer that is based on good number sense.

## rectangle



### rectangle

### rectangle

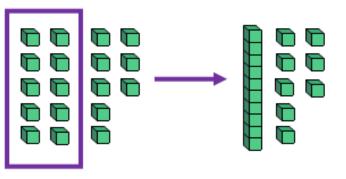


A quadrilateral with 2 pairs of congruent, parallel sides and 4 right angles.

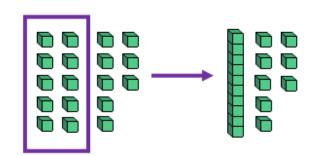
### regroup

### regroup

regroup



**Regroup 18 ones as 1 ten and 8 ones.** 

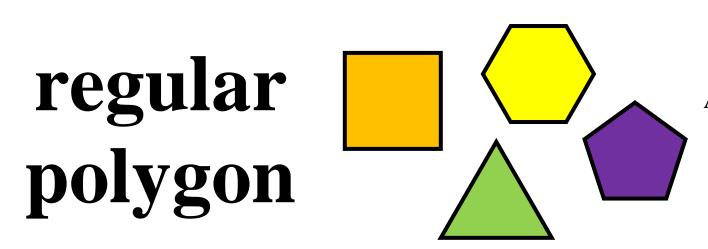


To rearrange the formation of a group.

Regroup 18 ones as 1 ten and 8 ones.

## regular polygon





A polygon with all sides the same length and all angles the same measure.

### related facts

# related Related Facts for 3, 5, 8 facts 3+5=8 8-5=3 5+3=8 8-3=5

related facts **Related Facts for 3, 5, 8** 

$$3 + 5 = 8$$
  $8 - 5 = 3$ 

5+3=8 8-3=5

Related addition and subtraction facts or related multiplication and division facts. (also known as fact family)

### remainder

### remainder

There are 32 students going on a field trip. Each chaperone can supervise 5 students. How many chaperones are needed?

 $32 \div 5 = 6 r2$ 

#### 7 chaperones are needed.

There are 32 students going on a field trip. Each chaperone can supervise 5 students. How many chaperones are needed?

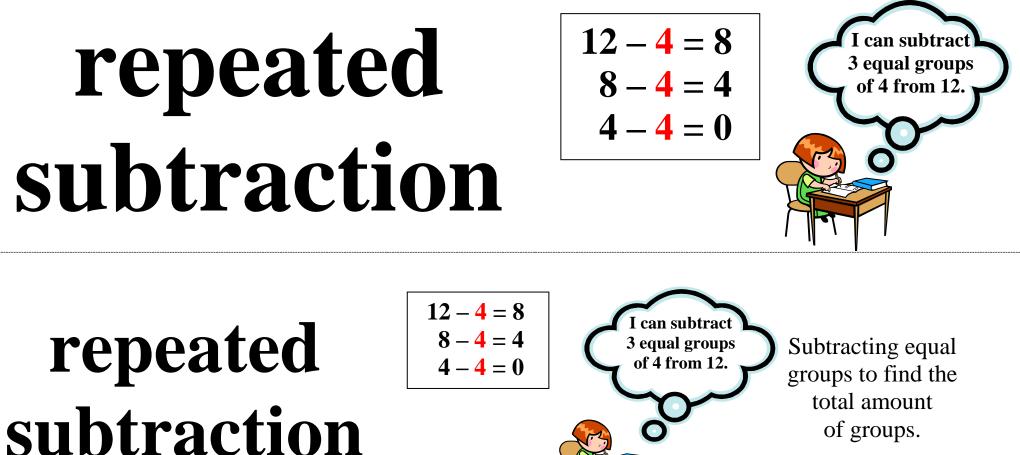
 $32 \div 5 = 6 r2$ 

The amount left over when one number is divided by another.

7 chaperones are needed.

### remainder

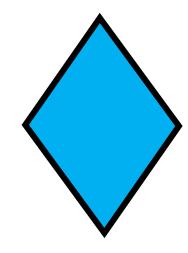
## repeated subtraction



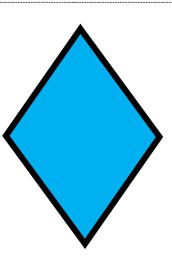
of groups.

### rhombus

### rhombus



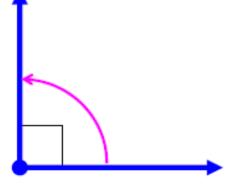
### rhombus



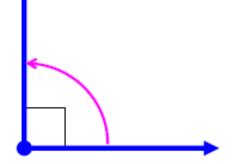
A quadrilateral with all 4 sides equal in length.

## right angle

right angle



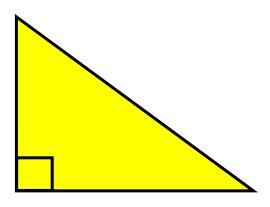
right angle



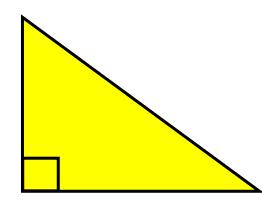
An angle that measures exactly 90°.

## right triangle

right triangle



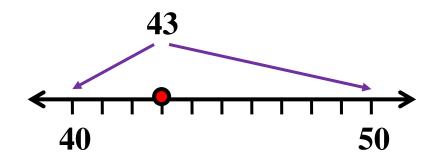
right triangle



A triangle that has one 90° angle.

### round a whole number

### round a whole number

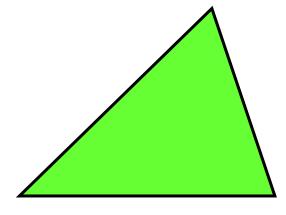




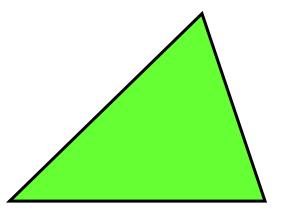
To find the nearest ten, hundred, thousand, (and so on).

## scalene triangle

### scalene triangle



scalene triangle



A triangle that has no equal sides.





(unit of time)



60 seconds = 1 minute



(unit of time)



A unit used to measure a very short amount of time; there are 60 seconds in one minute.

60 seconds = 1 minute

### sequence

### 2, 5, 8, 11, 14, 17... sequence

#### What is the pattern?

### sequence

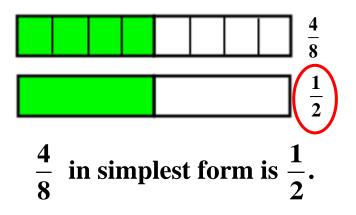
2, 5, 8, 11, 14, 17...

A set of numbers arranged in a special order or pattern.

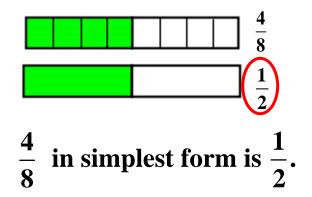
What is the pattern?

## simplest form

### simplest form



### simplest form



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

## simplify



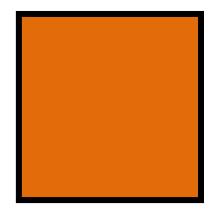
simplify

simplify



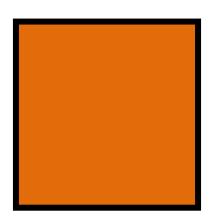
To express a fraction in simplest form.

### square



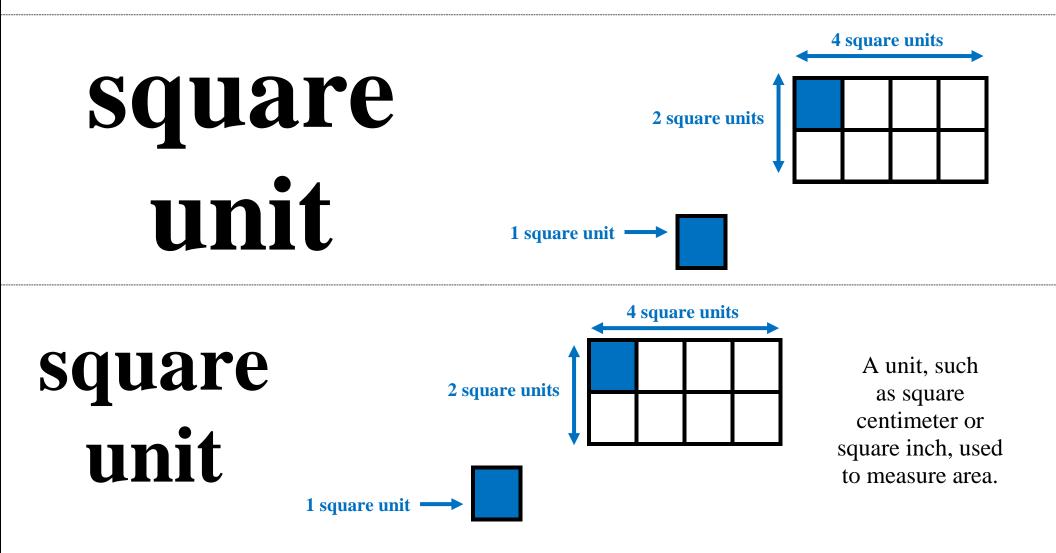
### square

### square



A parallelogram with 4 equal angles AND 4 equal sides.

## square unit



### standard form

### standard form



### standard form

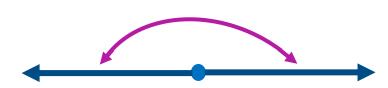


A common or usual way of writing a number using digits. (also known as base-ten numeral form)

## straight angle

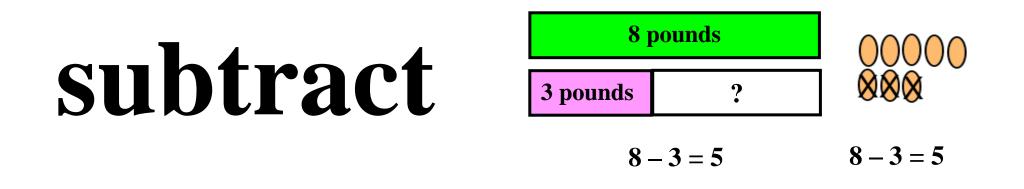
# straight angle



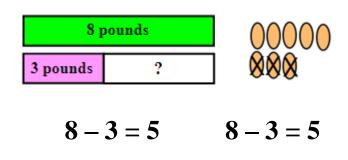


An angle that measures exactly 180°.

### subtract



### subtract



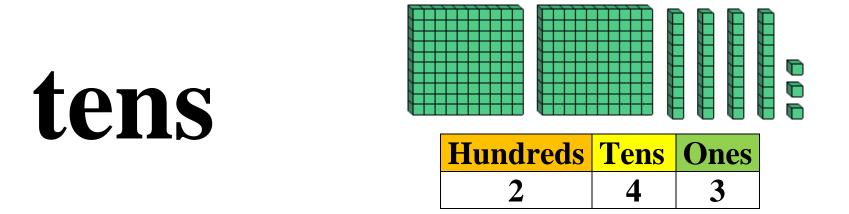
An operation that gives the difference between two numbers. Subtraction can be used to compare two numbers, or to find out how much is left after some is taken away.

### sum

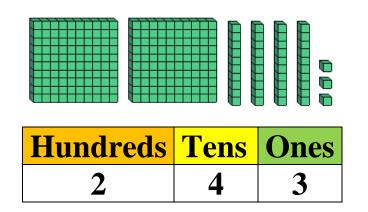
### **Sum** 453 + 929 = 1,382 sum

$$453 + 929 = 1,382$$
The answer to an addition problem.
Sum

## tens

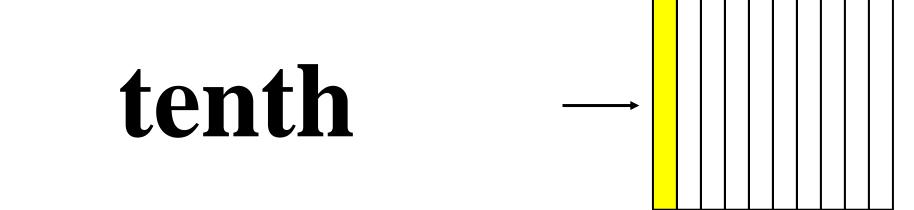


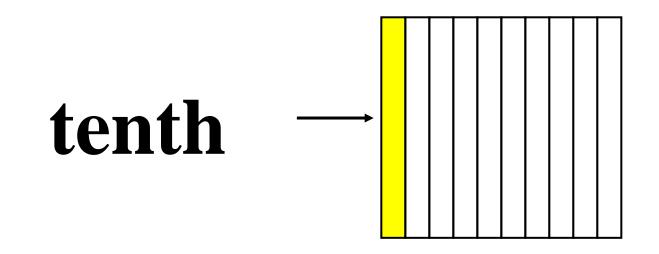
tens



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

## tenth





One of the equal parts when a whole is divided into 10 equal parts.

## tenths





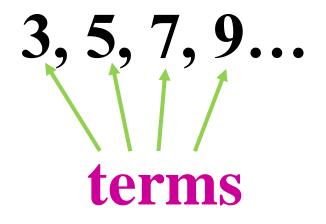
#### tenths



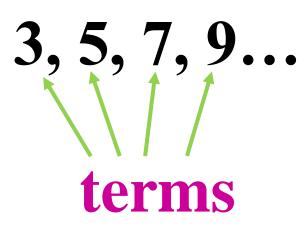
In the decimal numeration, tenths is the name of the place to the right of the decimal point.

## term

### term

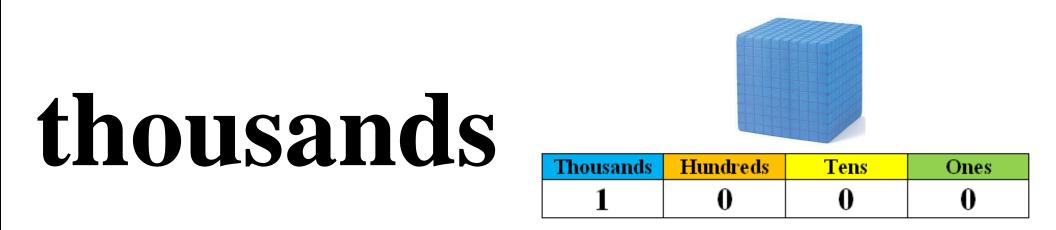


#### term

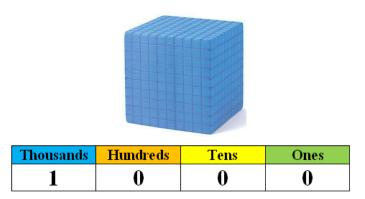


A component of a sequence. A term in a sequence is any number in that sequence.

# thousands



#### thousands



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

# time interval

## time interval



time interval



A duration of a segment of time. (also known as elapsed time)

# ton (T)



ton (T)

A small car weighs about 1 ton.

A customary unit of weight. 1 ton (T) = 2,000 pounds

A metric ton (t) is a unit of mass equal to 1,000 kilograms (about 2,200 pounds).

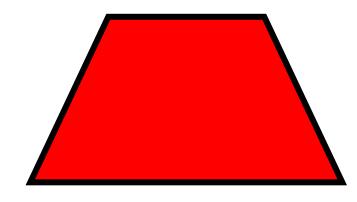


A small car weighs about 1 ton.

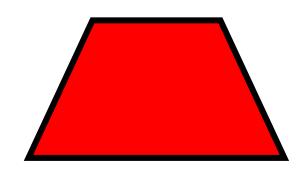
#### ton (T)

# trapezoid





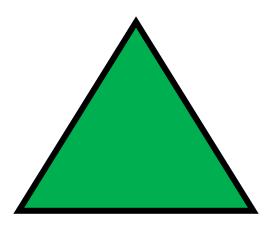
#### trapezoid



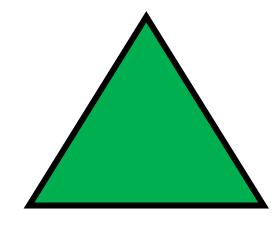
A quadrilateral with at least one pair of parallel sides.

# triangle





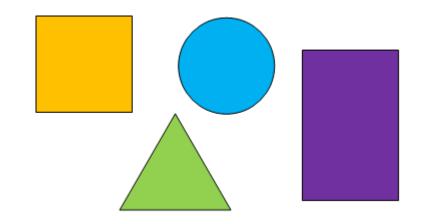
#### triangle



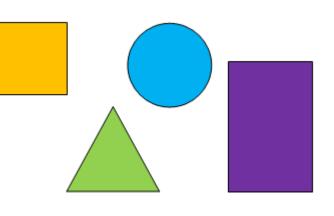
A polygon with 3 sides and 3 angles.

# two-dimensional figure

#### twodimensional figure



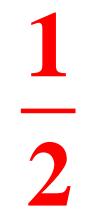
#### twodimensional figure

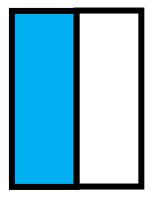


A plane, flat figure that has length and width.

# unit fraction

unit fraction





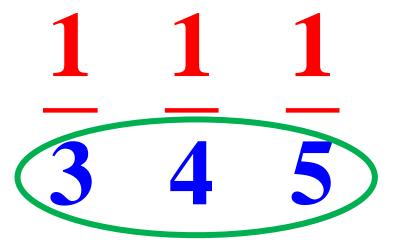
unit 1 fraction 2

A fraction that has 1 as its numerator. A unit fraction names 1 equal part of a whole.

## unlike denominators

## unlike 111 denominators 34

#### unlike denominators

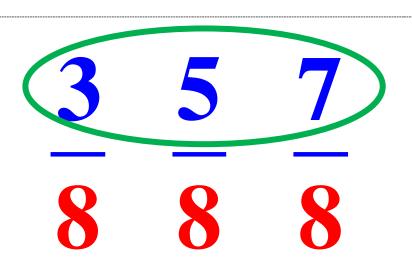


Denominators that are not equal.

## unlike numerators

# unlike357numerators888

unlike numerators

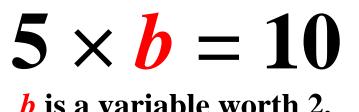


Numerators that are not equal.

# variable

#### $5 \times b = 10$ variable **b** is a variable worth 2.

### variable

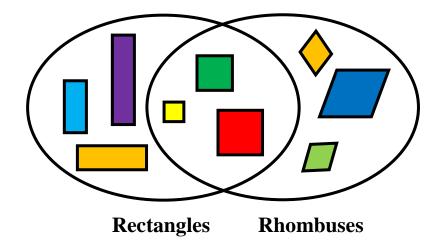


A letter or symbol that represents a number.

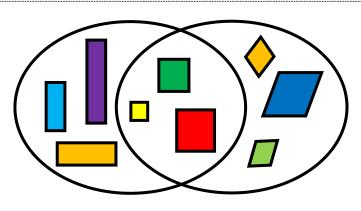
**b** is a variable worth 2.

# Venn diagram





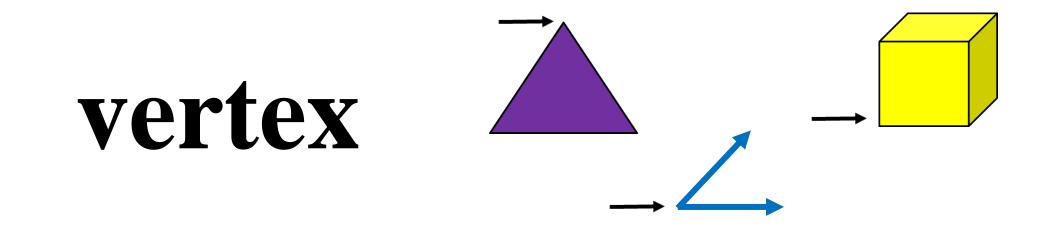
Venn diagram



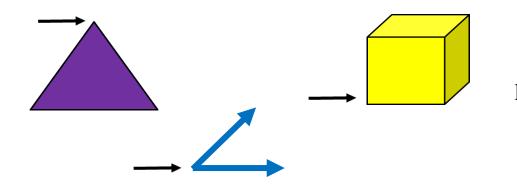
**Rectangles** Rhombuses

A drawing with circles or rings to show how sets of objects are related.

## vertex



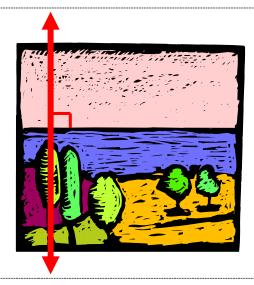




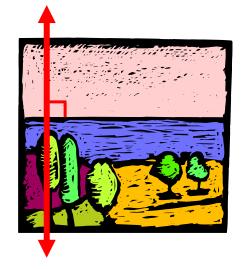
The point at which two line segments, lines, or rays meet to form an angle. (plural - vertices)

# vertical

## vertical



#### vertical



Perpendicular to the horizon. Vertical lines go up and down.

## volume (liquid)

#### volume (liquid)



liquid volume

#### volume (liquid)



The number of cubic units it takes to fill a figure.

liquid volume

# week

September								
Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.		
1	2	3	4	5	6	7		
8	9	10	11	12	13	14		
15	16	17	18	19	20	21		
22	23	24	25	26	27	28		
29	30							

7 days = 1 week

September									
Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.			
1	2	3	4	5	6	7			
8	9	10	11	12	13	14			
15	16	17	18	19	20	21			
22	23	24	25	26	27	28			
29	30								

 There are seven days
 in a week: Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday.

```
7 days = 1 week
```

#### week

week

# weight







The measure of how heavy something is.

# whole

## whole







#### whole





All of an object, a group of objects, shape, or quantity.

1 whole pie

1 whole rectangle

# whole numbers

## whole numbers

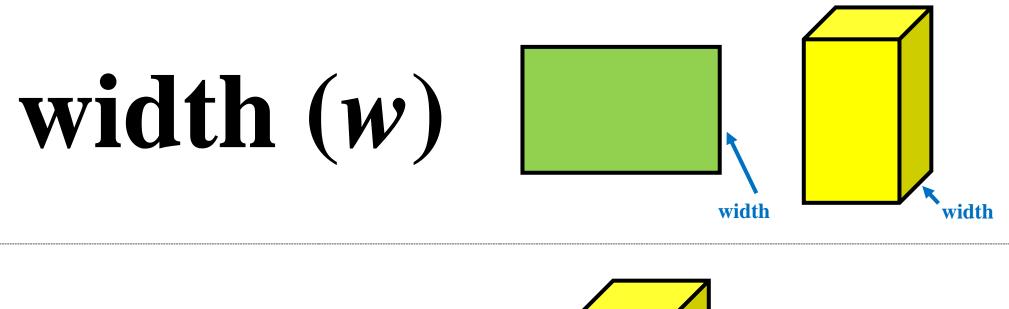


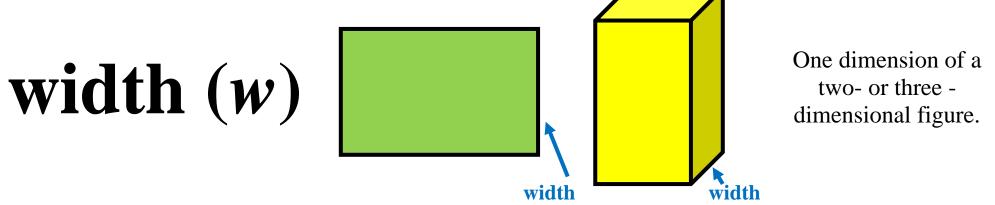
#### whole numbers



Whole numbers are 0 and the counting numbers 1, 2, 3, 4, 5, 6, and so on.

# width (w)





# word form

# word form

The word form of 12,345 is twelve thousand, three hundred forty-five.

#### word form

The word form of 12,345 is twelve thousand, three hundred forty-five.

A way of using words to write a number. (also known as number name)

# yard (yd)

## yard (yd)



A door is about 1 yard wide.

yard (yd)

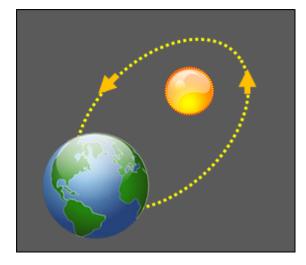


A door is *about* 1 yard wide.

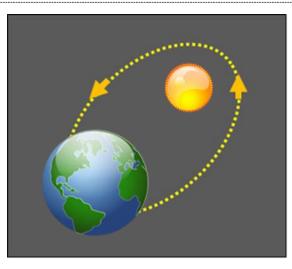
A customary unit of length. 1 yard = 3 feet or 36 inches

## year





#### year



The length of time it takes the Earth to revolve around the sun. 12 months = 1year 365 days = 1 year 366 days = 1 leap year

## Zero Property of Multiplication

#### Zero Property $8 \times 0 = 0$ of Multiplication

# $\frac{\text{Zero Property}}{\text{of Multiplication}} \quad 8 \times 0 = 0 \qquad \text{The product of any factor and zero is 0.} \qquad \text{The prod$