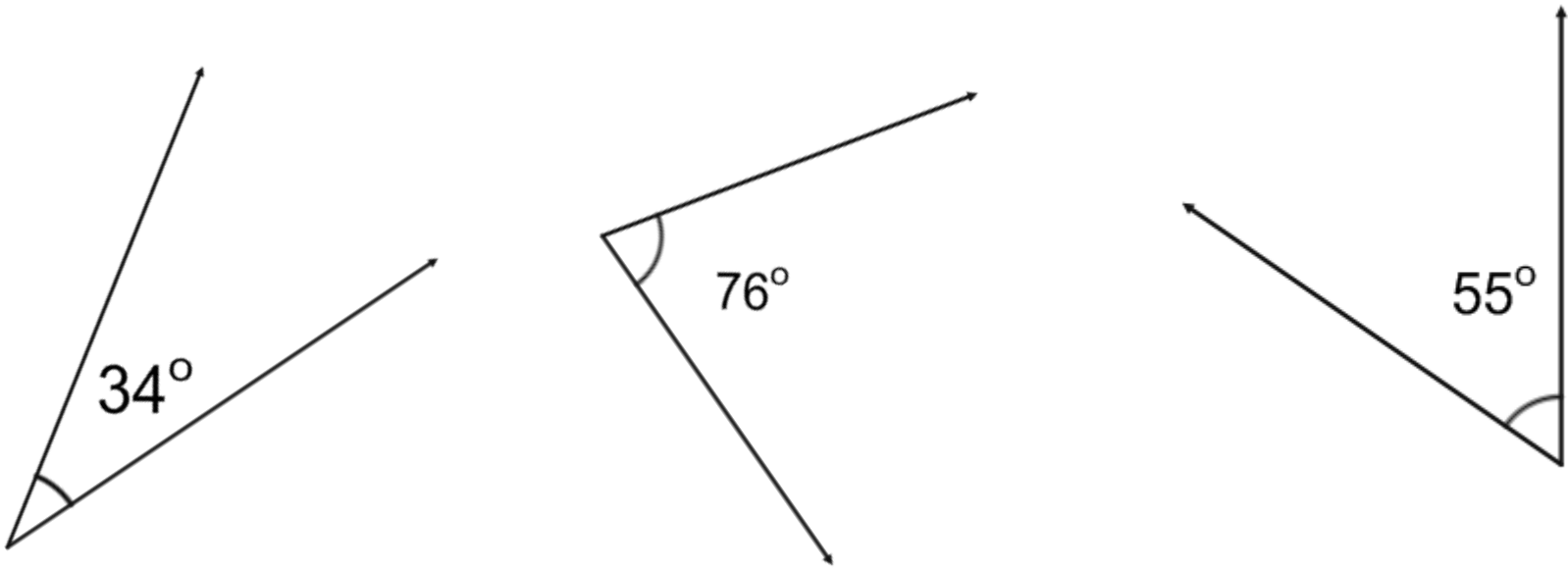




K-5 Student Glossary for the 2017 Kansas Mathematics Standards

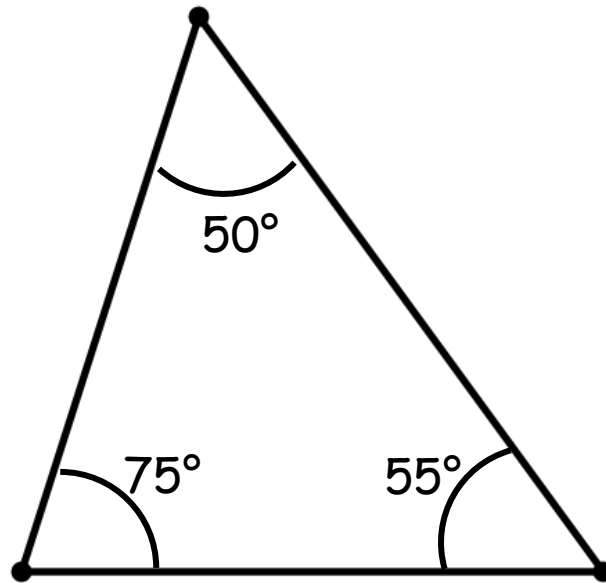
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acute angle



an angle with a measure
less than 90°

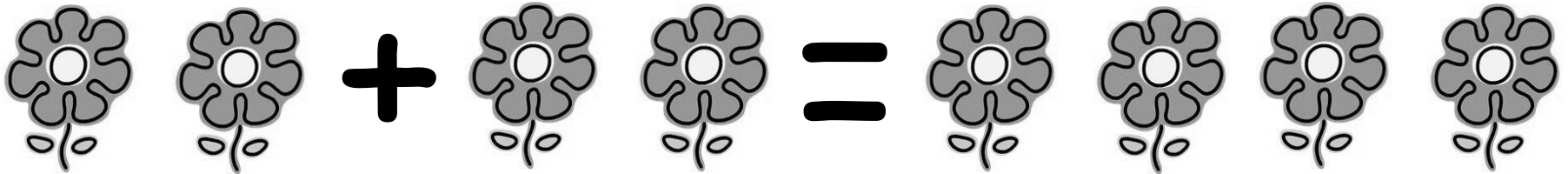
acute triangle



a triangle with all interior angles
measuring less than 90°

addition

component parts: addend + addend = sum



$$2 + 2 = 4$$

an operation that combines two or more numbers or groups of objects

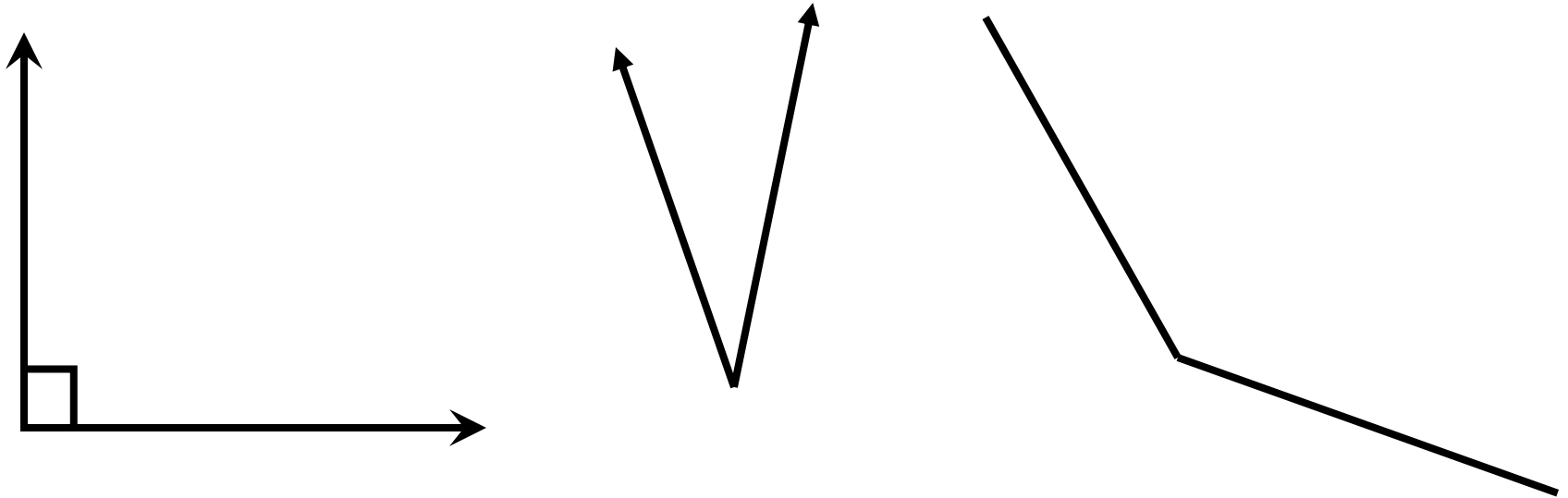
additive identity property of zero

$$8 + 0 = 8$$

$$0 + \frac{1}{2} = \frac{1}{2}$$

when you add 0 to any number you end
up with that number

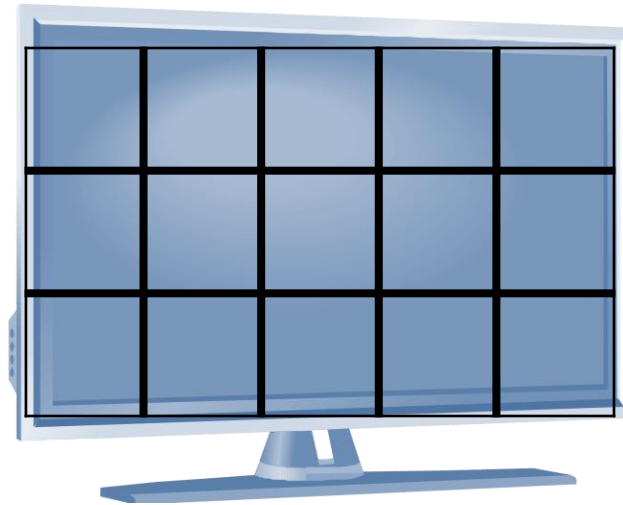
angle



two rays or line segments that
share an endpoint

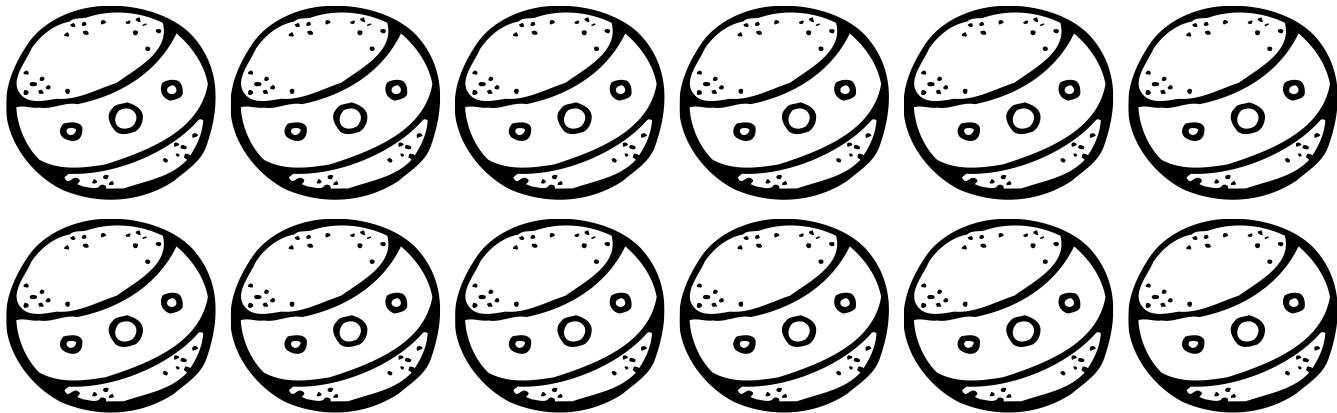
area

The area of the
TV screen is
15 square units.



the number of square units
needed to cover a given surface

array



a rectangular arrangement of objects
with equal amounts in each row

associative property

$$(5+2)+8 = 5+(2+8)$$

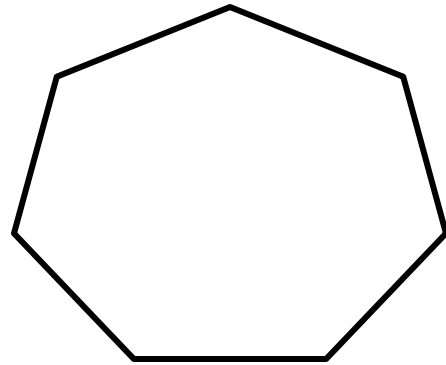
$$(a \cdot b) \cdot c = a \cdot (b \cdot c)$$

in addition and multiplication, no matter how the numbers are grouped, the answer will always be the same

attribute

3

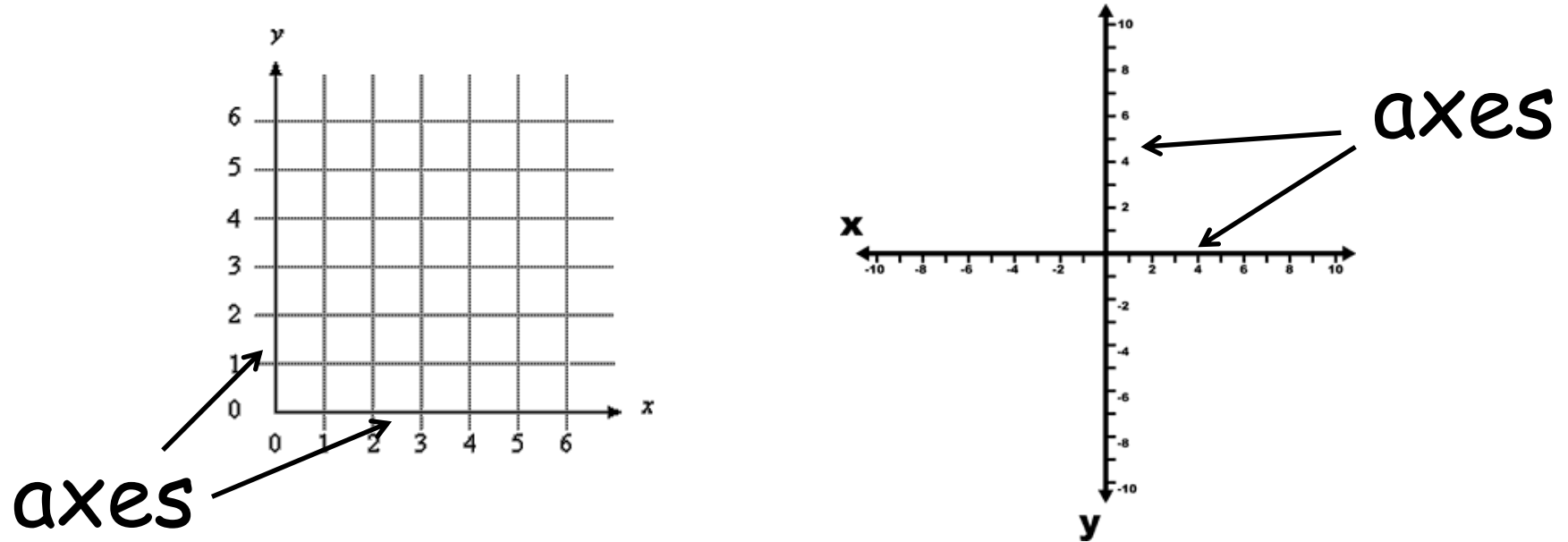
odd



equal sides

a characteristic of a number, geometric figure, mathematical operation, equation, or inequality

axis

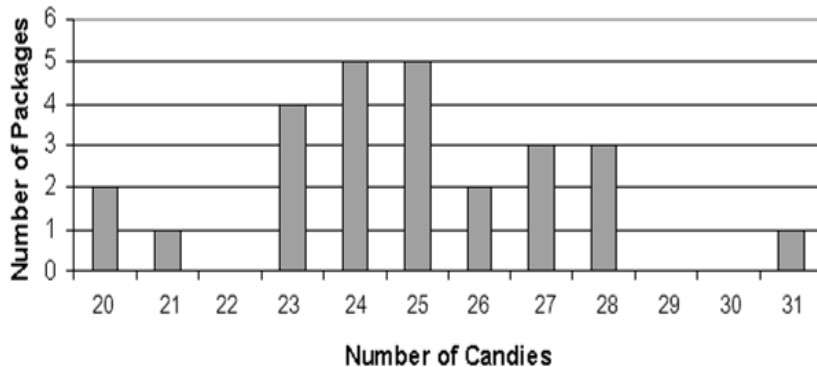


any of the number lines that intersect
to form a coordinate system

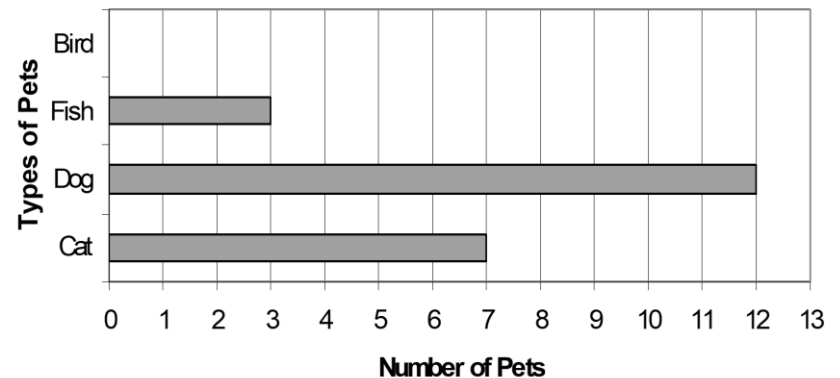
*the plural of axis is axes

bar graph

Number of Candies

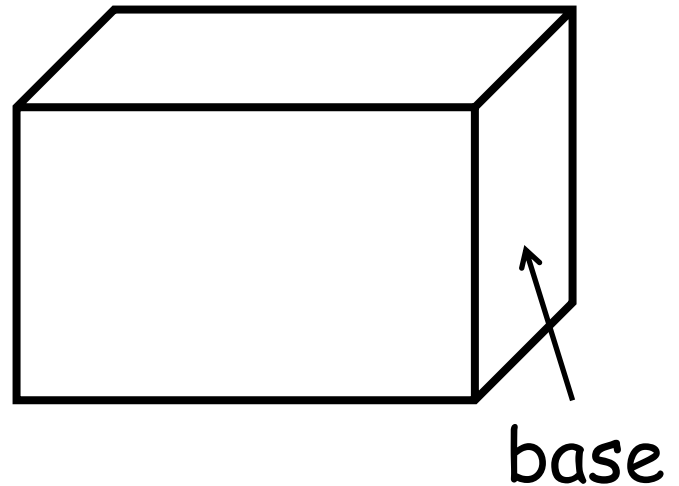
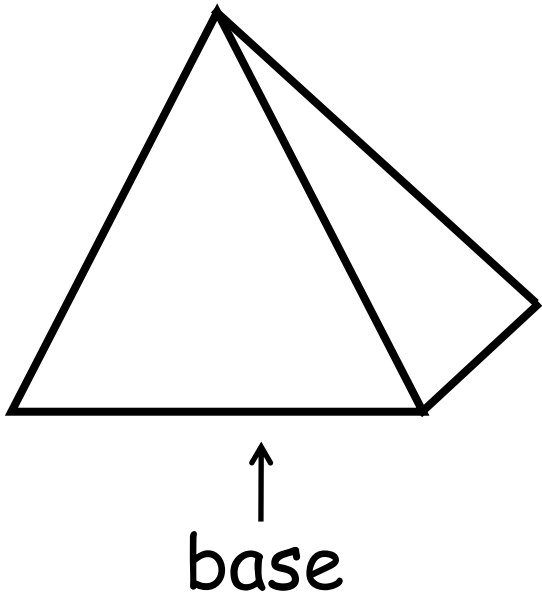


How Many Pets?



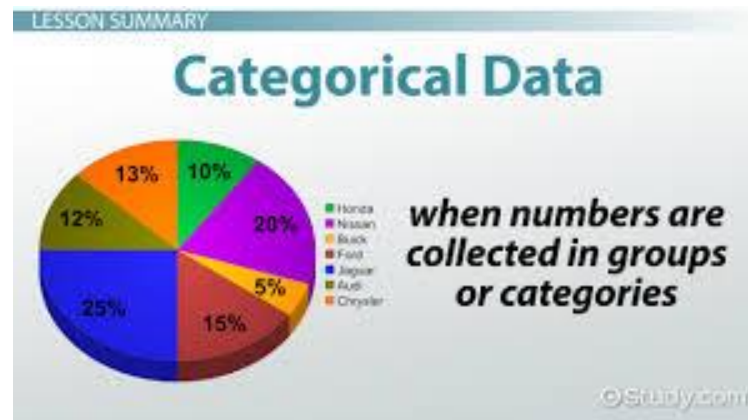
a display that uses horizontal or vertical bars to represent data

base (solid figure)



the face that helps identify the figure
(it does not always have to be on the
bottom of the figure)

categorical data



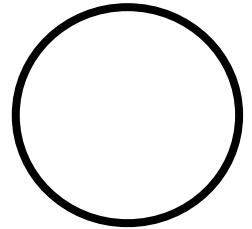
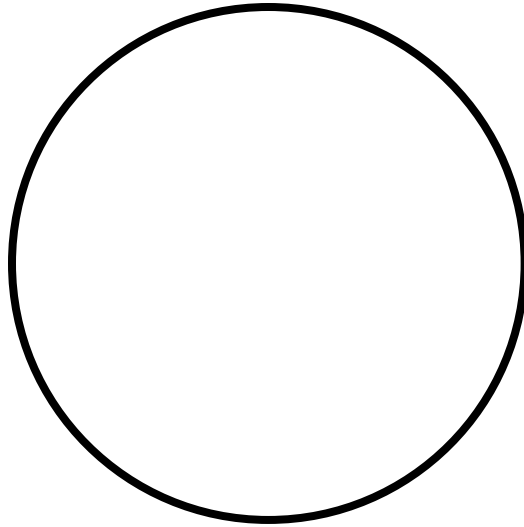
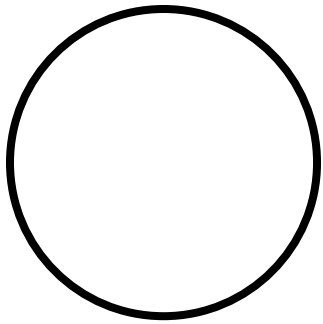
data that can be divided into groups; i.e
eye color, favorite college

chart (table)

How Students Get to School	
Bike	
Walk	
Bus	
Car	

information organized in
columns and rows

circle



a closed curve with all its points the
same distance from the center

commutative property

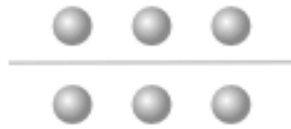
$$5+3 = 3+5$$

$$\frac{1}{2} \times \frac{1}{4} = \frac{1}{4} \times \frac{1}{2}$$

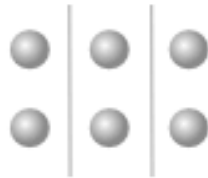
numbers may be added or multiplied
together in any order without
changing the answer

composite number

composite number



divided into 2 groups

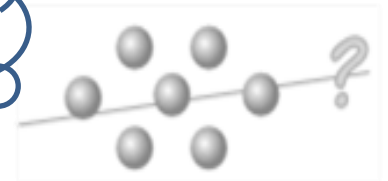


divided into 3 groups

factors of 6: 1, 2, 3, 6

NOT a composite number

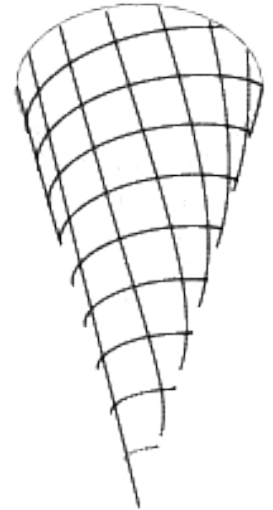
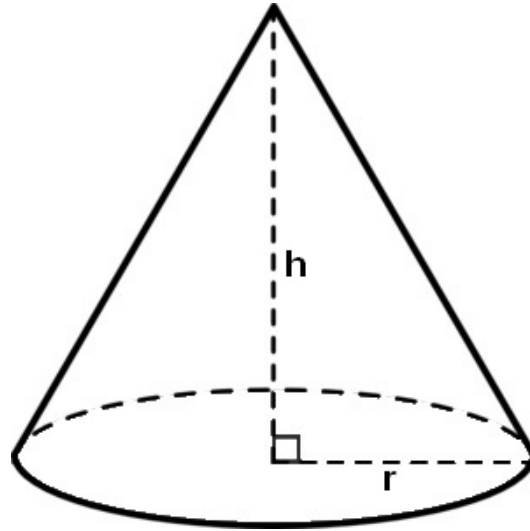
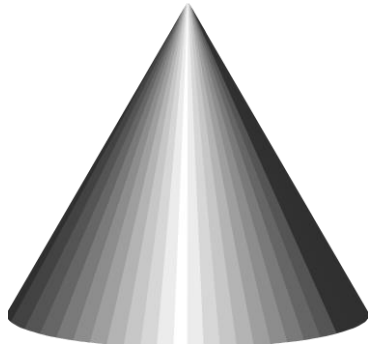
7 cannot be
divided into
equal groups



factors of 7: 1, 7

a number that has more than two factors

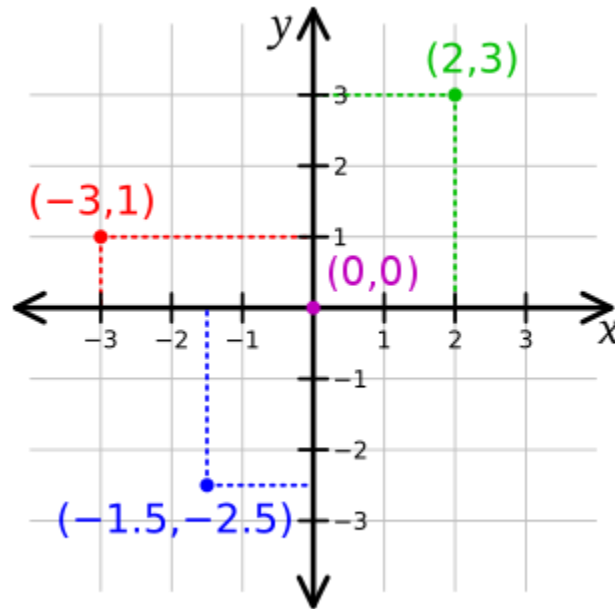
cone



a 3-dimensional figure with a curved surface, a flat circular base, and a vertex

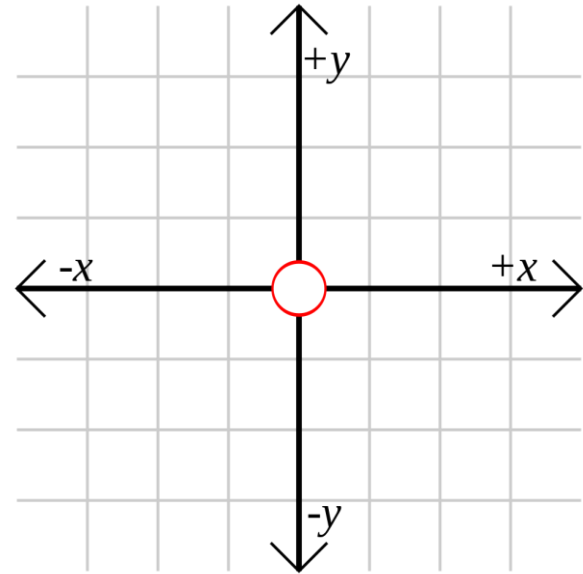
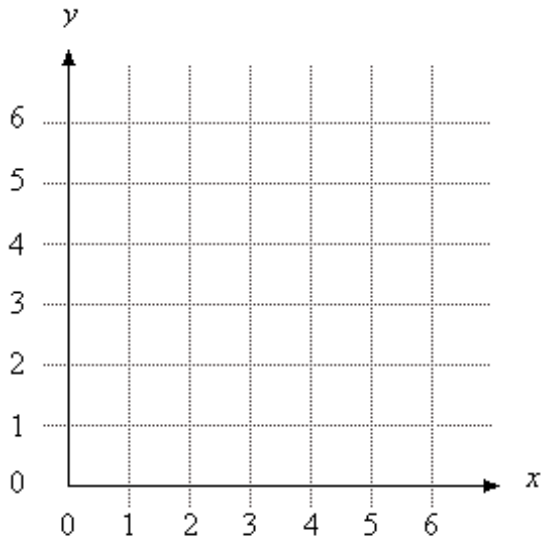
coordinates

x	y
0	0
2	3
-3	1
-1.5	-2.5



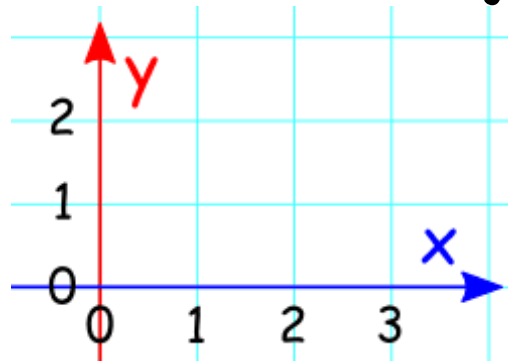
an ordered pair of numbers (x, y) that gives the location of a point on a coordinate plane

coordinate grid/plane



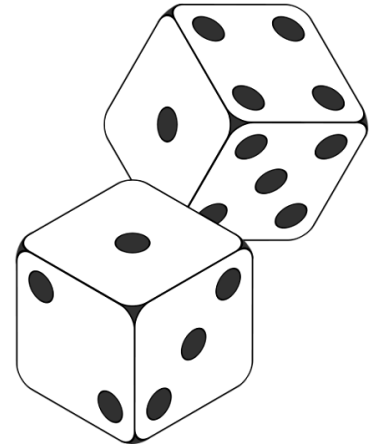
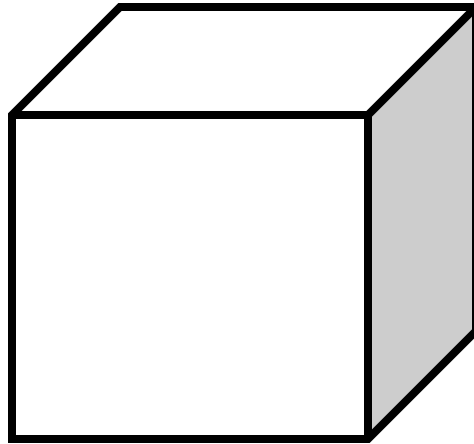
the plane formed by two perpendicular number lines intersecting at their zero points used for displaying the location of coordinates

coordinate system



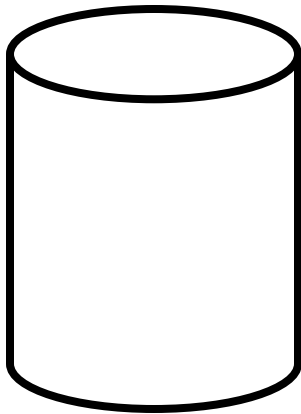
a plane formed by a horizontal number line, called the x-axis, and a vertical number line, called the y-axis which intersect at a point called the origin

cube



a 3-dimensional figure with
six congruent square faces

cylinder



a 3-dimensional figure with one curved surface and two parallel, congruent circular bases

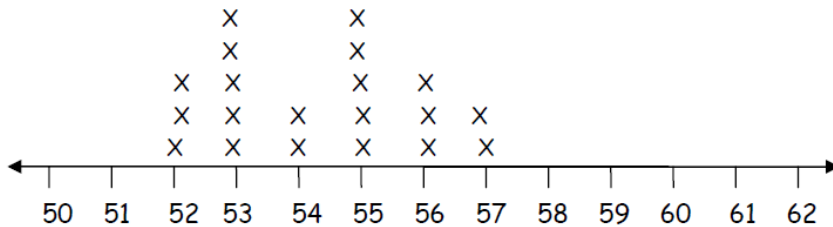
data



information that is collected by counting, measuring, asking questions, or observing that is usually organized for analysis

data display

Heights of 5th grade girls (in inches)



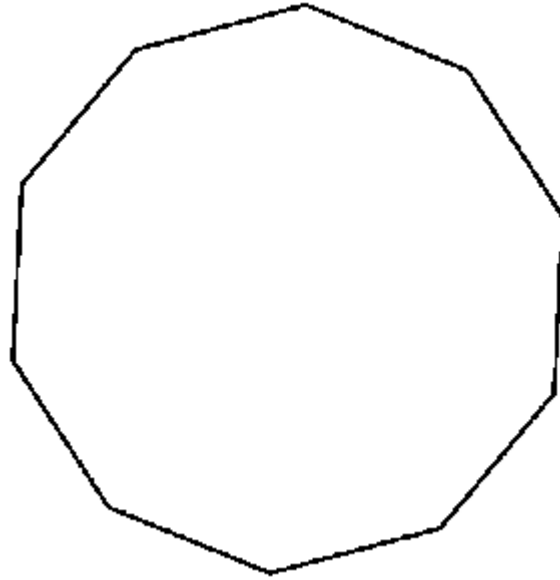
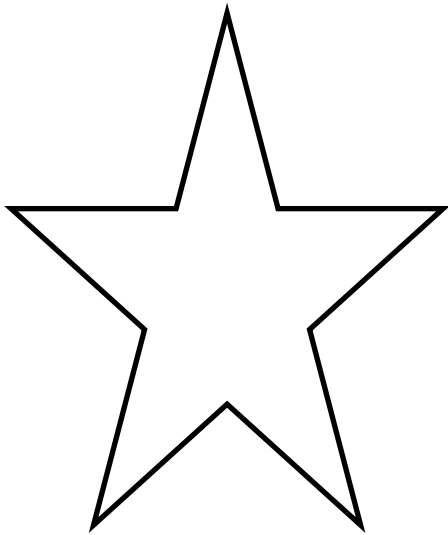
How Students Get to School

Bike	
Walk	
Bus	
Car	

Sides of Squares				
# of sides	4	8	12	16
# of squares	1	2	3	4

a way to organize data

decagon



a polygon with 10 sides

decimal fraction

\$23.75

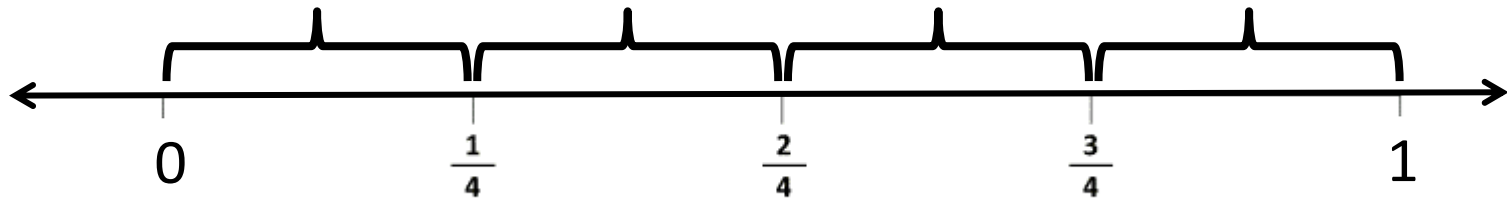
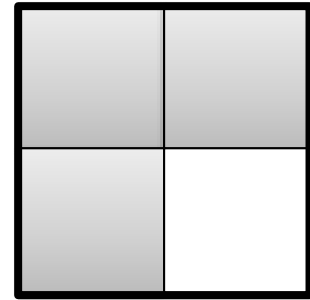
.6

4.0

a number written in standard
base-10 notation

denominator

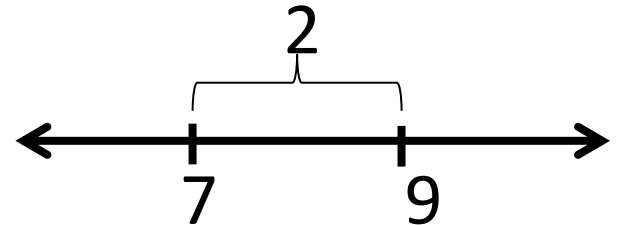
$\frac{3}{4}$
→ 4 equal parts



the number of equal parts making up a
whole
(the bottom number in a fraction)

difference

$$\begin{array}{|c|} \hline 9 \\ \hline \end{array} \quad \begin{array}{|c|} \hline 7 \\ \hline \end{array} \quad \underline{\quad 2 \quad}$$



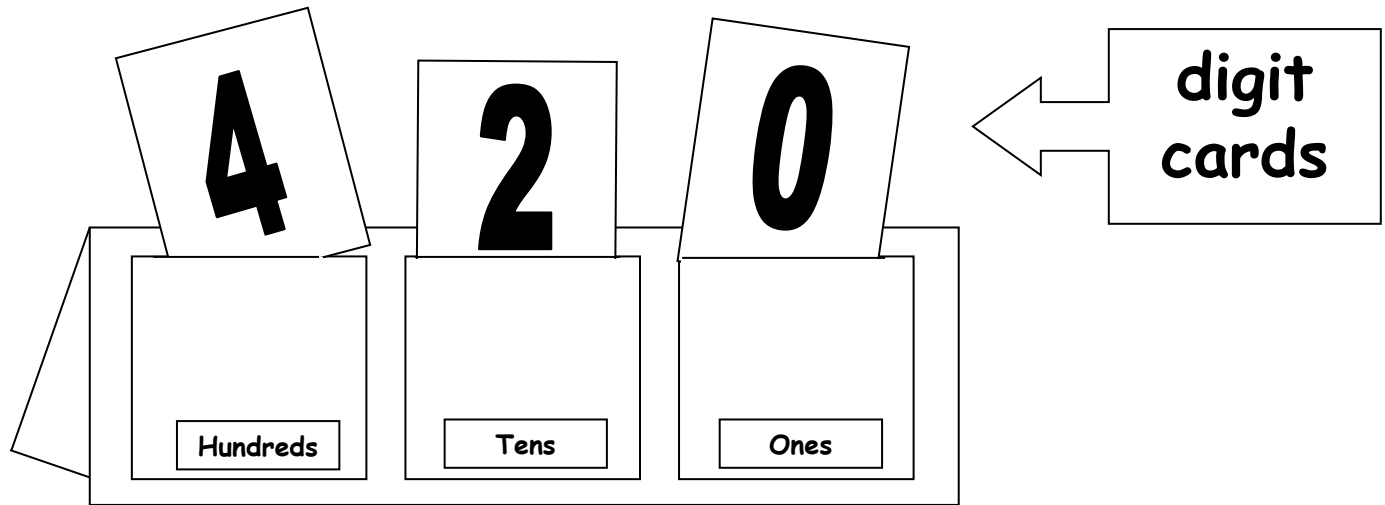
$$9 - 7 = 2$$

← difference

the space between the value of two
numbers

(the result of subtracting one number from another)

digit



any one of the ten symbols
0, 1, 2, 3, 4, 5, 6, 7, 8, 9

distributive property
of multiplication
over addition

$$4(2+3) = 4 \times 2 + 4 \times 3$$

$$123 = (1 \times 100) + (2 \times 10) + (3 \times 1)$$

division

component parts: dividend $\div$ divisor = quotient

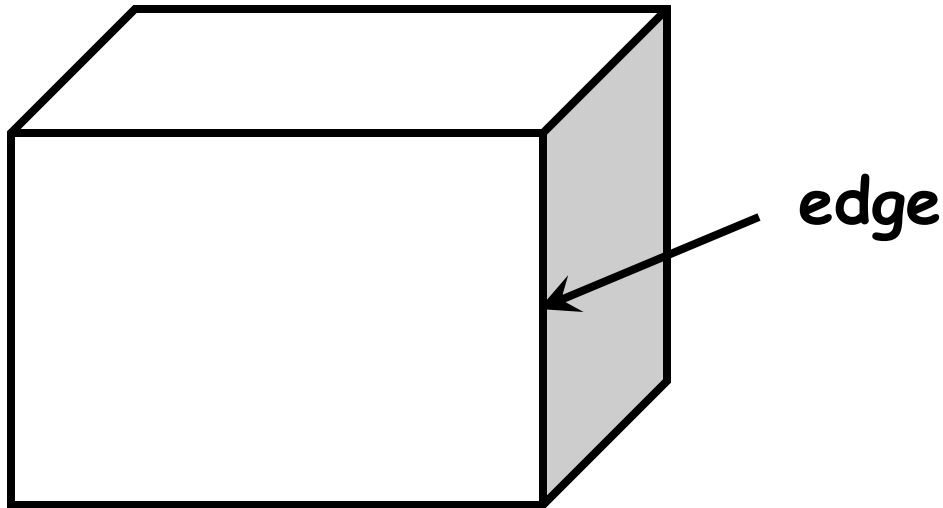
$$\frac{6}{3} = 2$$

$$6 \div 3 = 2$$

$$\begin{array}{r} 2 \\ 3 \overline{) 6} \end{array}$$

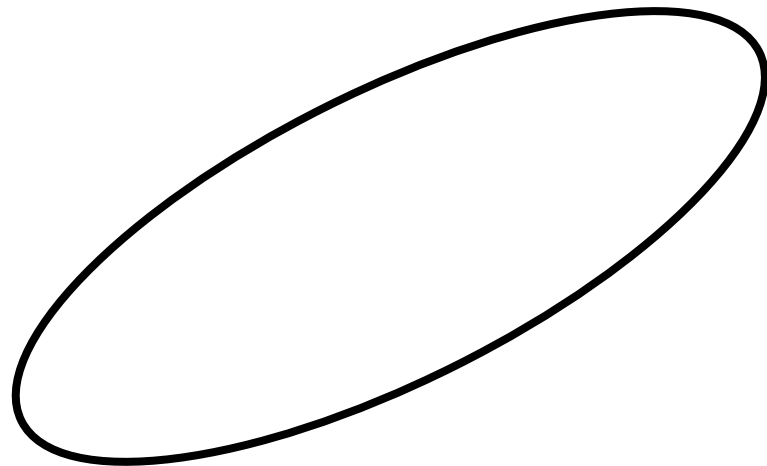
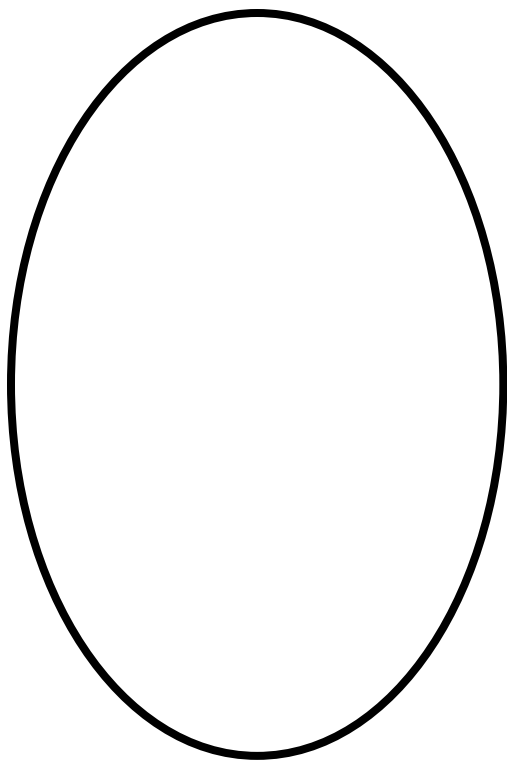
the operation of making equal groups
to find out how many in each group or
how many groups

edge



where two faces of a solid shape
intersect

ellipse



equal



=



$$2 + 4 = 13 - 7$$

having the same value

equation

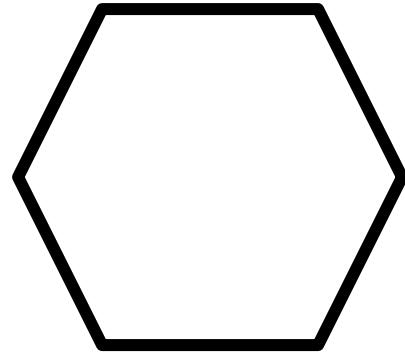
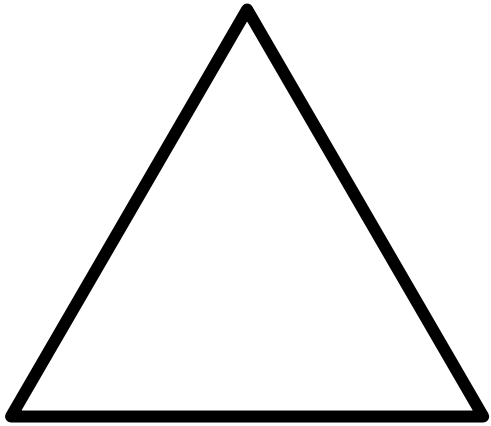
$$8 + 2 = 10$$

$$5 \times 5 = 100 \div 4$$

$$20 = 18 + 2$$

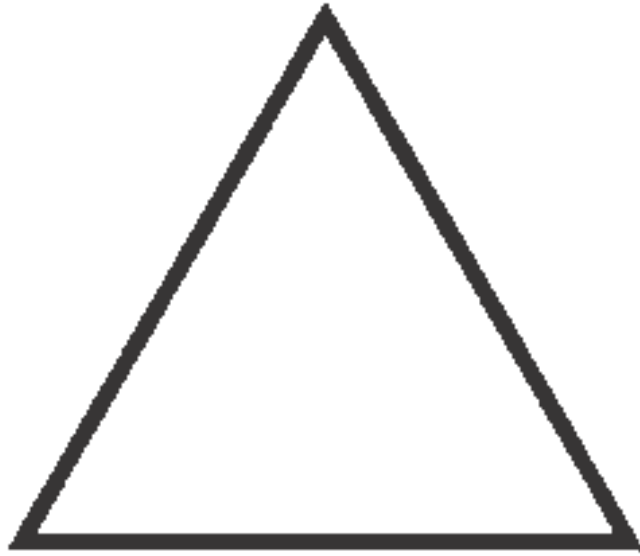
a mathematical sentence where the left side of the equal sign has the same value as the right side of the equal sign

equilateral



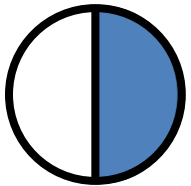
a polygon with all sides congruent

equilateral triangle



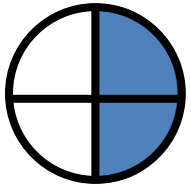
a triangle whose sides are all
the same length

equivalent



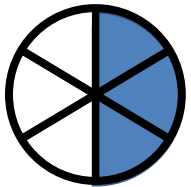
$$\frac{1}{2}$$

$$7 + 2 = 10 - 1$$



$$\frac{2}{4}$$

$$.5 = \frac{1}{2}$$

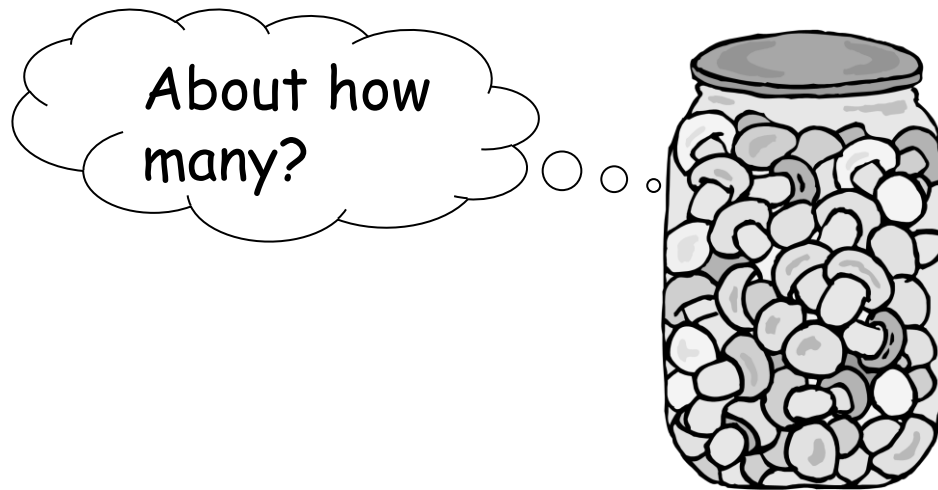


$$\frac{3}{6}$$

$$.5 = .50$$

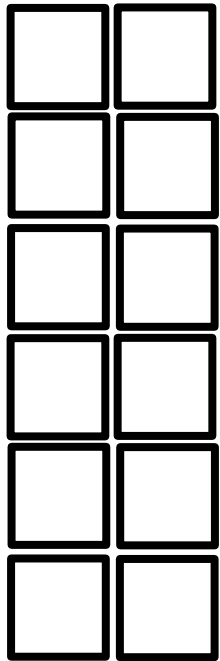
having the same value

estimate



to find a number close to an
exact amount

even number



374

12

86,460

3,496

whole numbers that are divisible by 2

Hint: even numbers have 0, 2, 4, 6, or 8 in the ones place

expanded form

(expanded notation)

$$493 = 400 + 90 + 3$$

$$493 = (4 \times 100) + (9 \times 10) + 3$$

a way to write numbers showing
the place value of each digit

exponent

$$10^5$$


exponent

$$10 \times 10 \times 10 \times 10 \times 10$$

a numeral telling how many times a factor is to be multiplied

expression

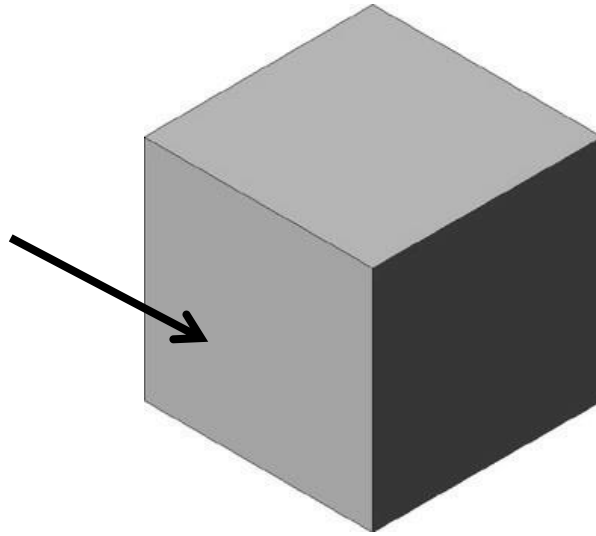
$$6 \times 9$$

$$(12 \div 3) + 2$$

$$20 - y$$

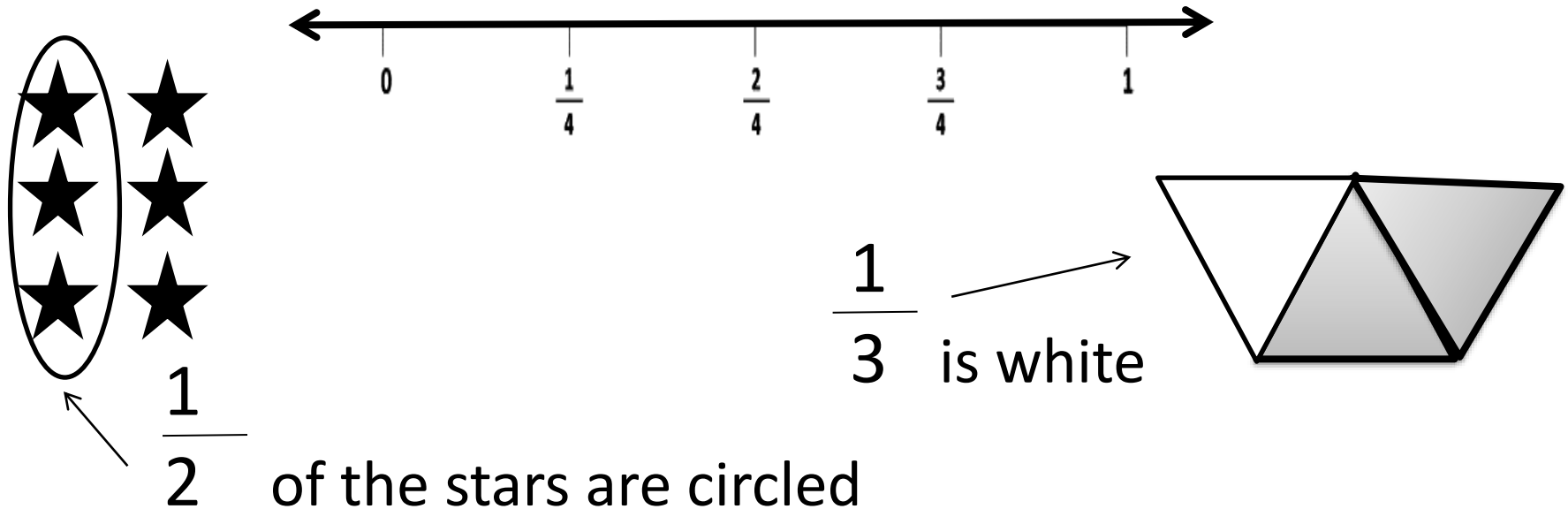
a mathematical phrase made up of
numbers, variables, operational
symbols, and/or parentheses

face



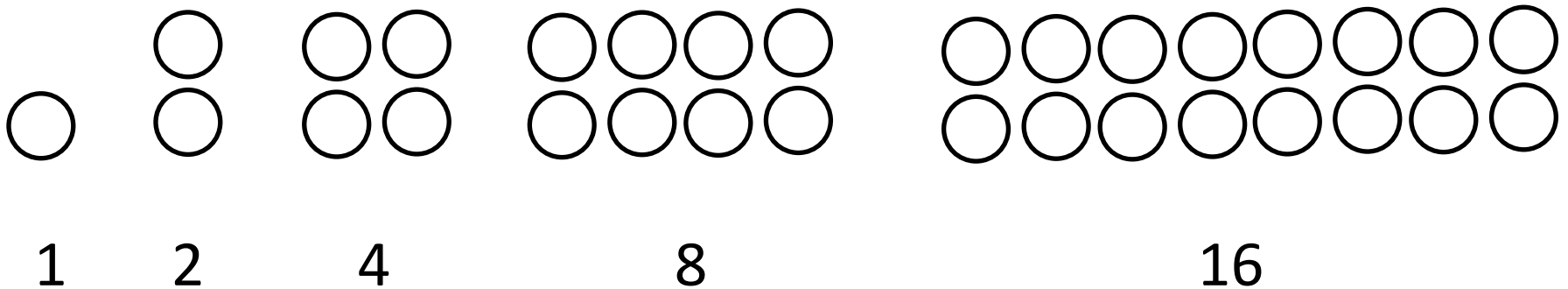
the flat surface of a solid figure

fraction



a part of a whole (region, line or set); the name for a number written in the form $\frac{a}{b}$ (e.g. $\frac{1}{4}$)
A fraction may also be used to represent division.

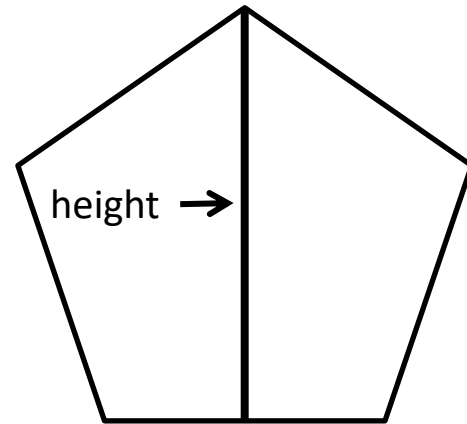
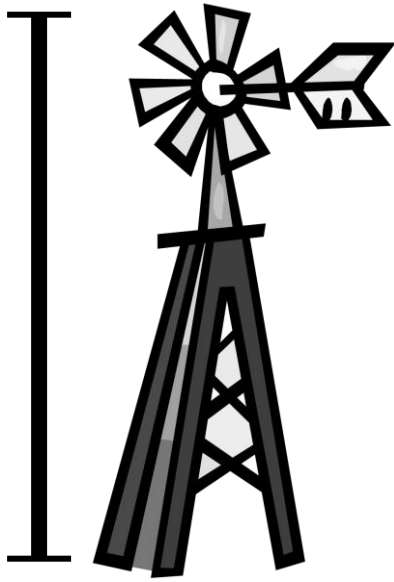
growth pattern



This pattern is following a "x2" rule.

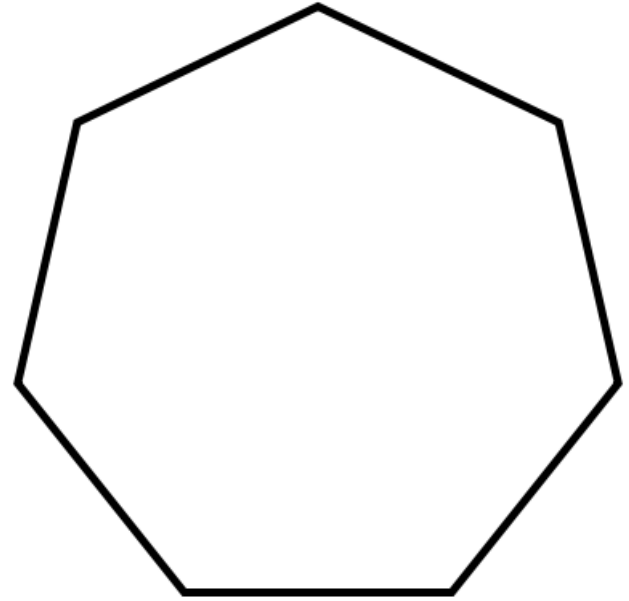
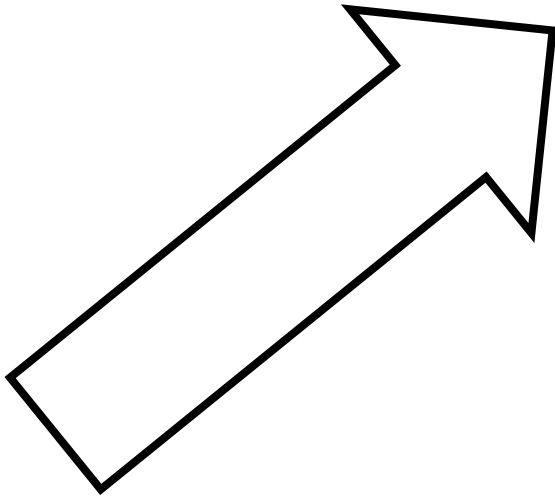
a type of pattern made by following a rule using operations

height



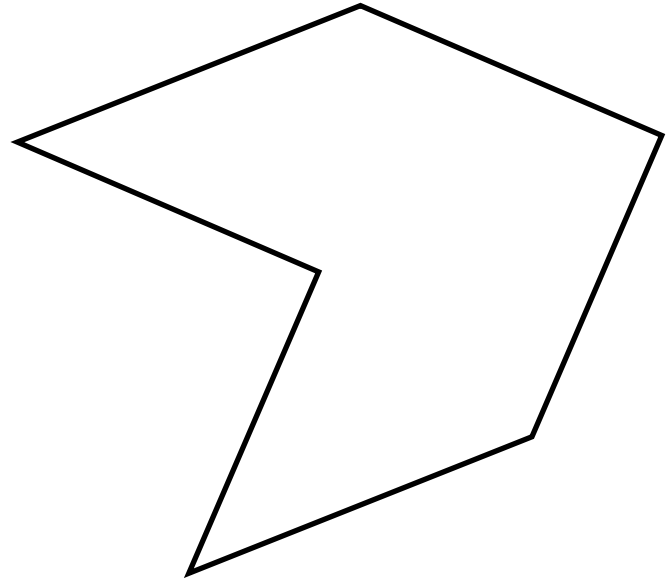
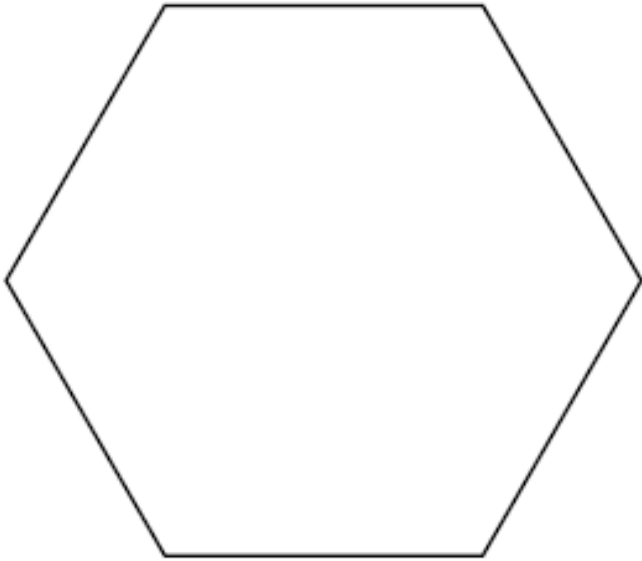
the distance from the base to
the top of an object or shape

heptagon (septagon)



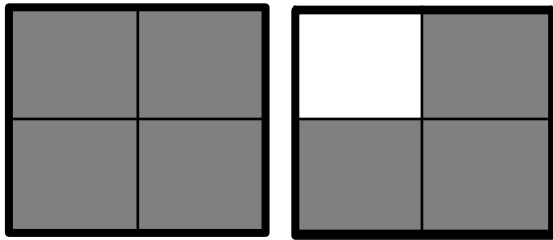
a polygon with 7 sides

hexagon

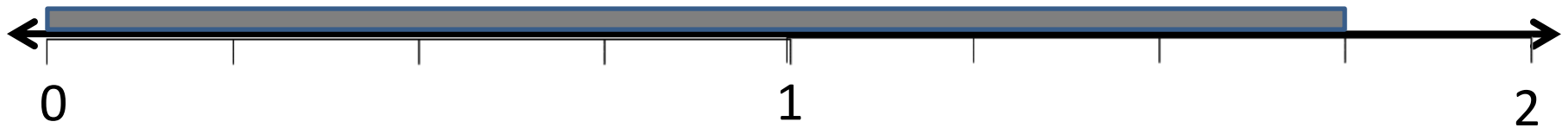


a polygon with 6 sides

improper fraction



$$\frac{7}{4}$$



a fraction with a numerator that is greater than or equal to its denominator

inequality

$$4 + 3 < 5 + 7$$

$$2y > 14$$

a number sentence not equal in size,
amount, or value

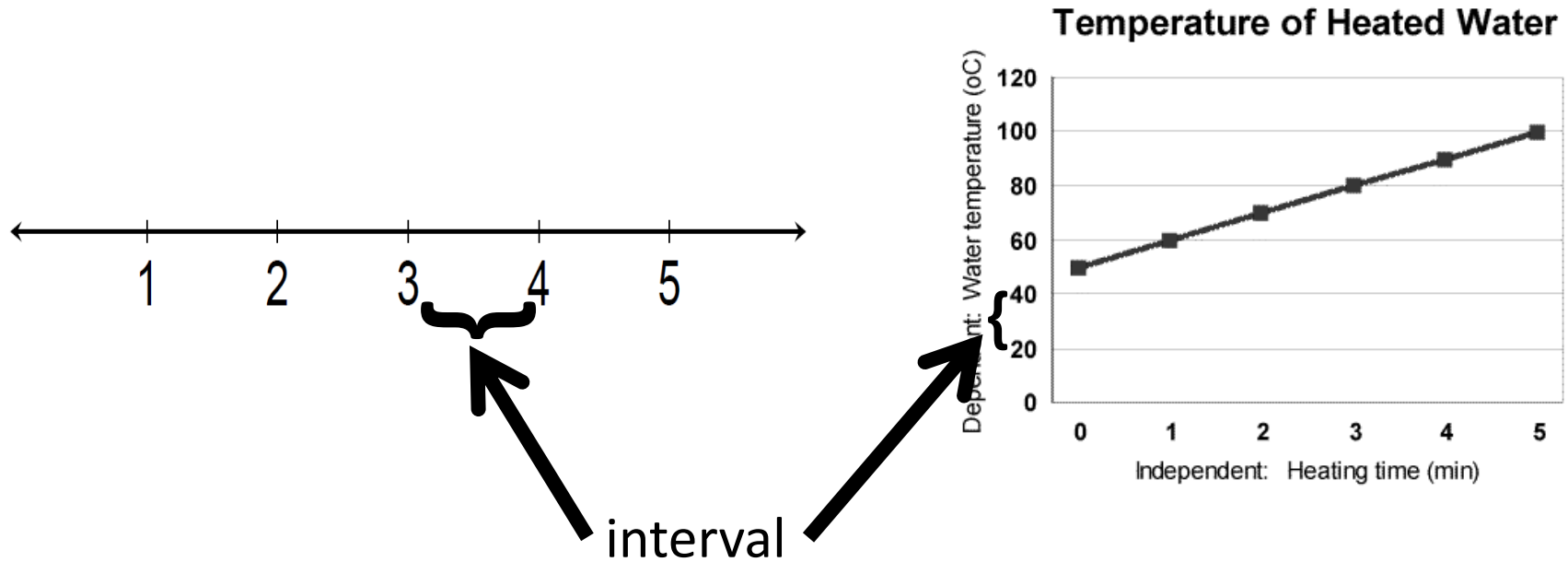
(usually one of the following symbols is used $<$, $>$, $\leq$, $\geq$, $\neq$)

input/output table

in	out
2	8
3	9
5	
9	

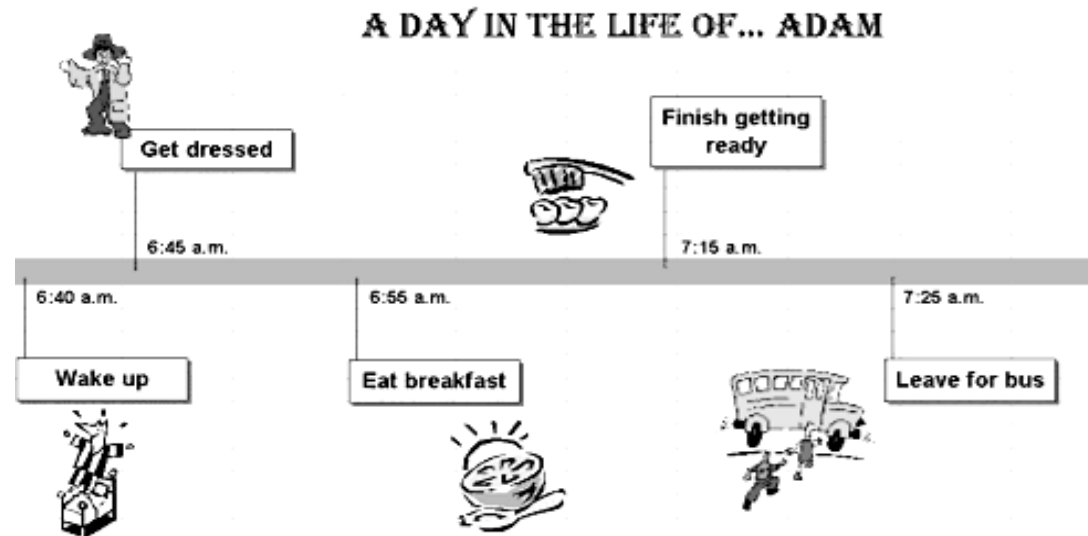
a table that shows an output value for each input value

interval (linear)



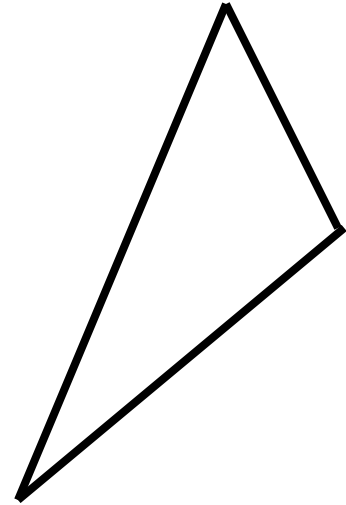
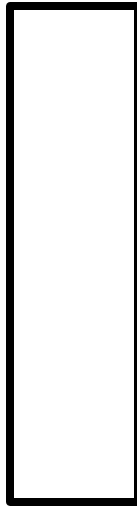
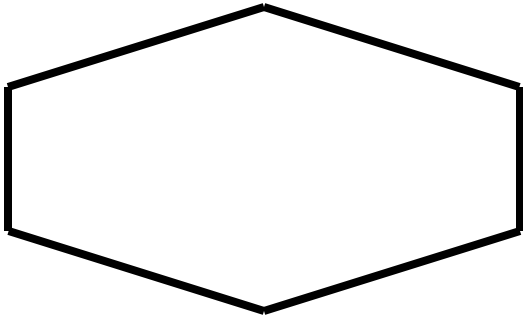
space between numbers on a number line or the grid lines of a graph

interval (time)



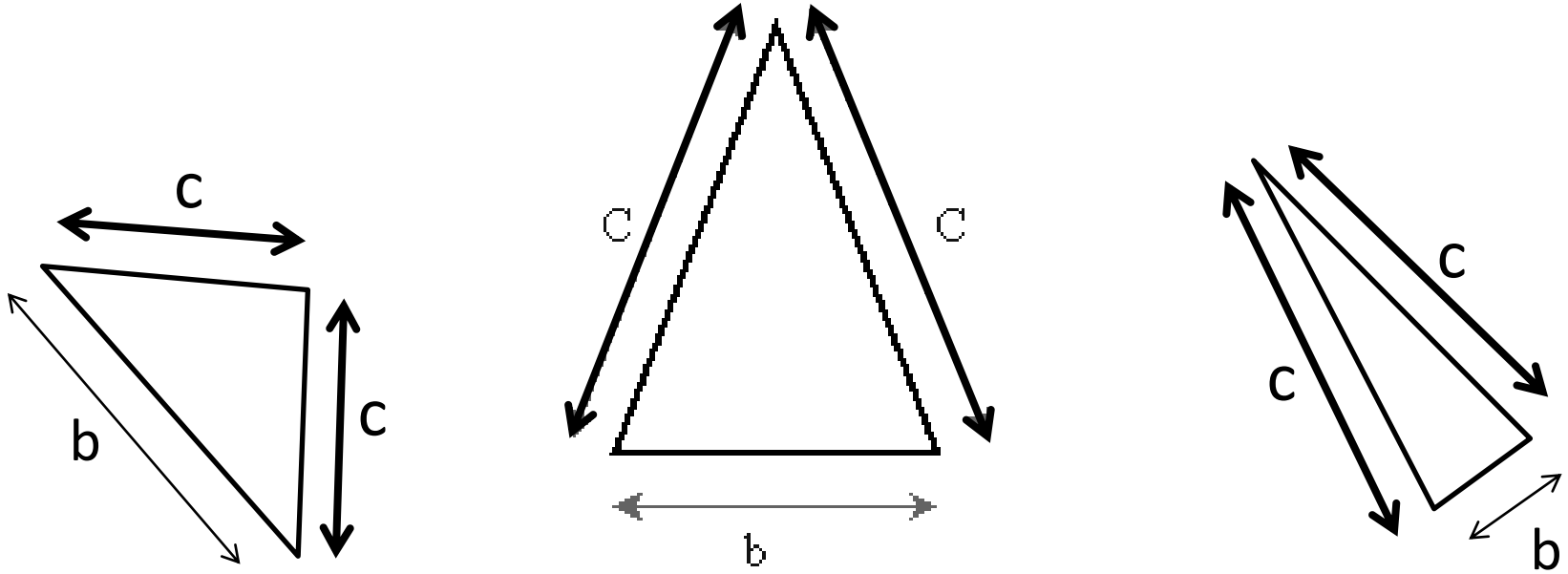
a space of time between
events

irregular polygon



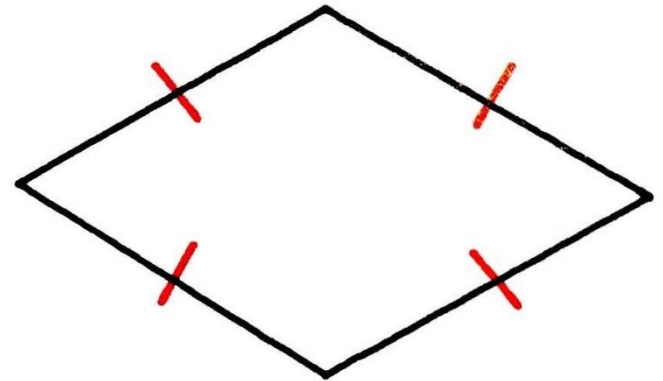
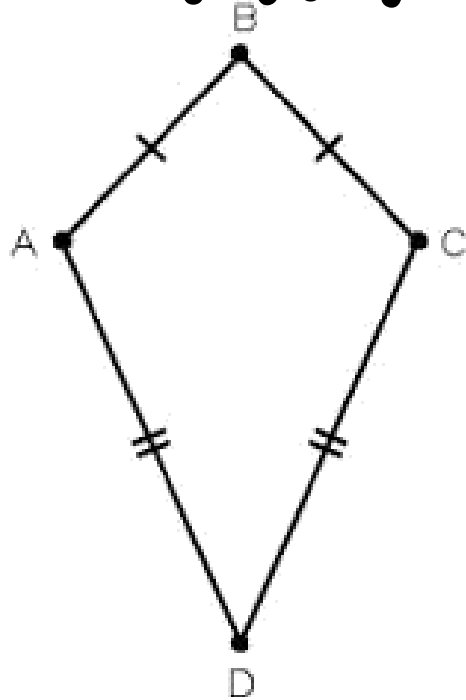
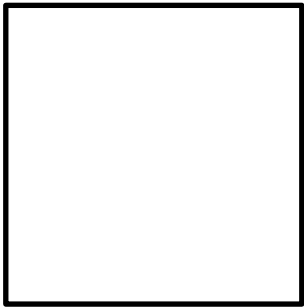
a polygon whose sides are
not all the same length

isosceles triangle



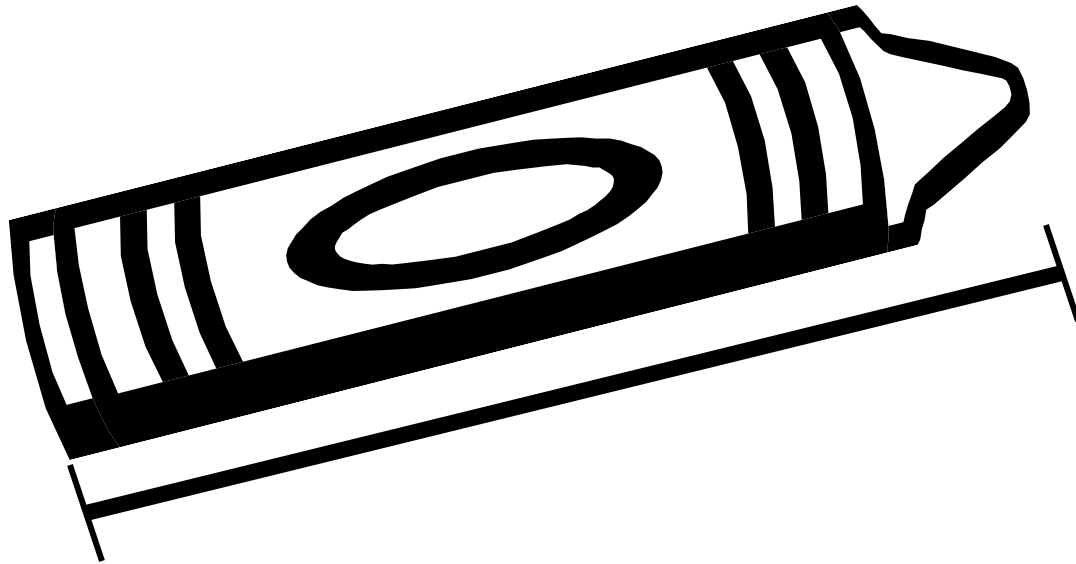
a triangle with 2 equal sides

kite



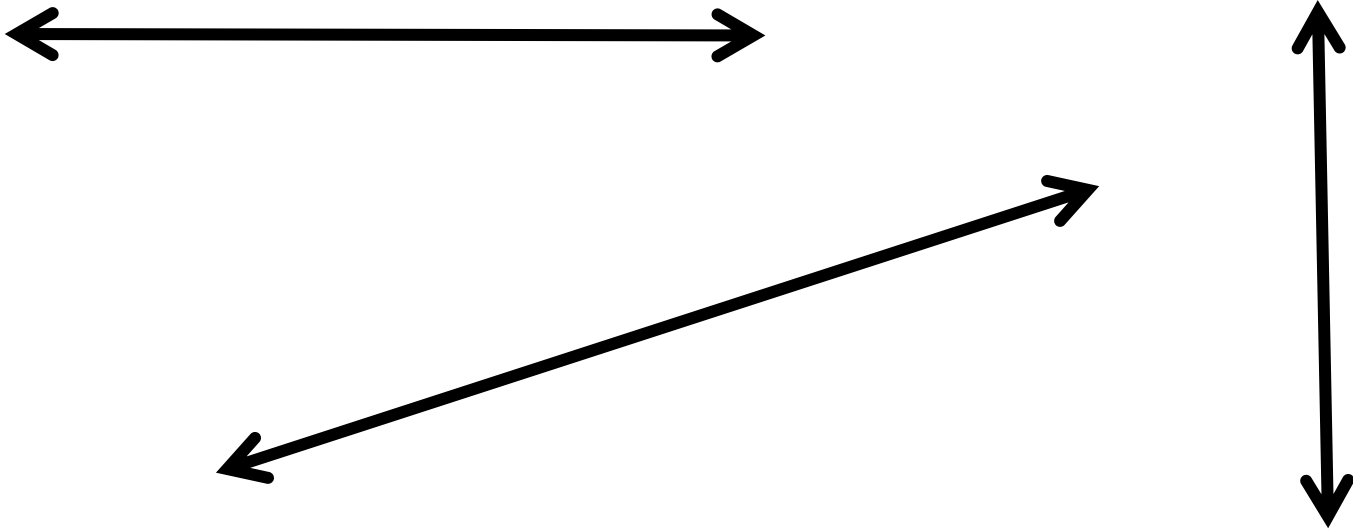
a quadrilateral with two pairs of
equal adjacent sides

length



the measure of one side of an object, typically the longer side

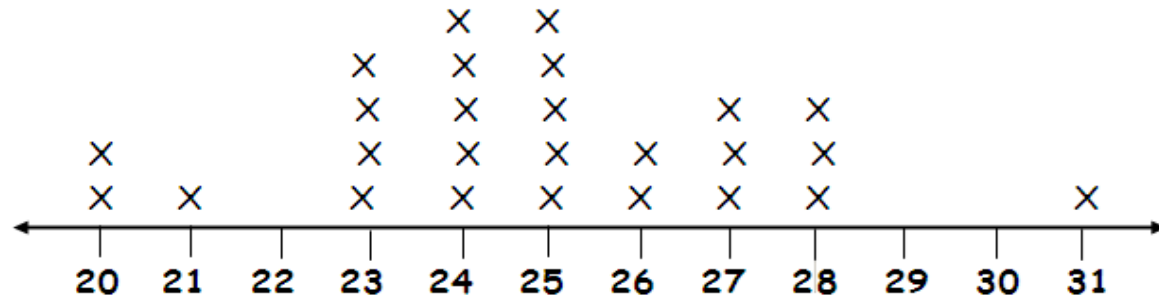
line



an infinite set of points forming a
straight path extending in two
directions

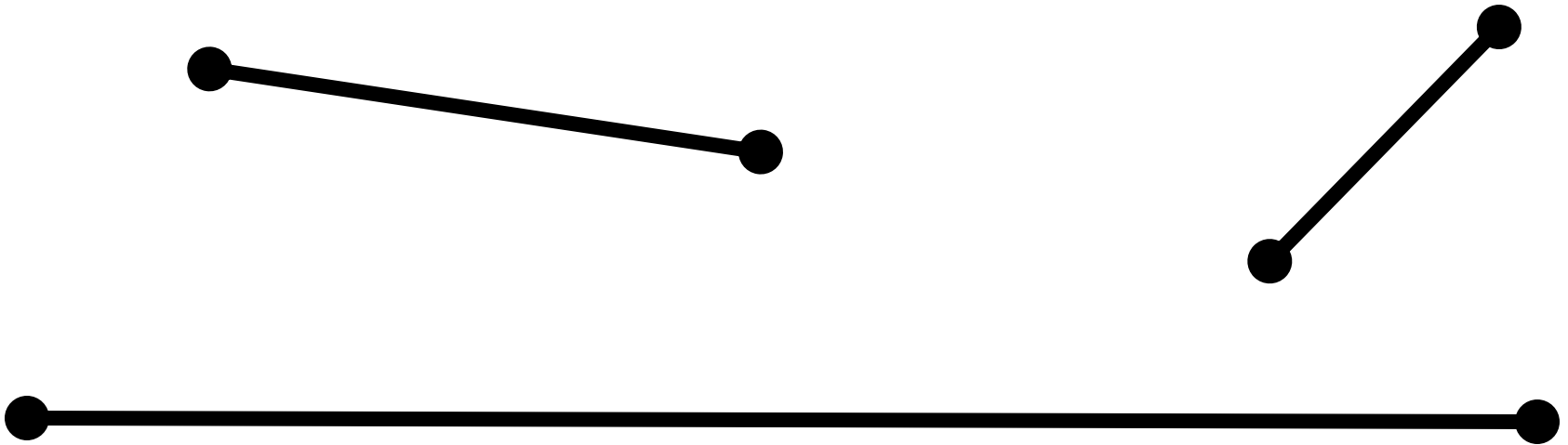
line plot (dot plot)

Number of Candies



a display using a number line with marks or dots that show frequency

line segment



a part of a line defined by
two endpoints

liquid volume (capacity)



the amount that a container can hold

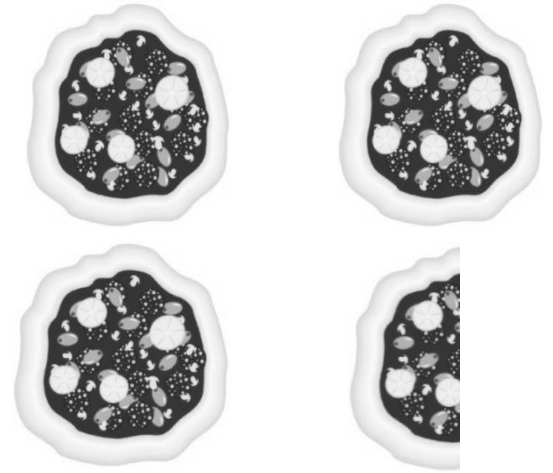
common units of measure: cup, pint, gallon, liter, etc.

mathematical modeling

the process of developing a description of
a system using mathematical concepts and
language

mixed number

$$3\frac{1}{2}$$



a quantity written with an integer and
a fraction

multiple

multiples of 3

3, 6, 9, 12, 15, 18

multiples of 6

6, 12, 18, 24, 30

the product of any number and a counting number is a multiple of that number

multiplication

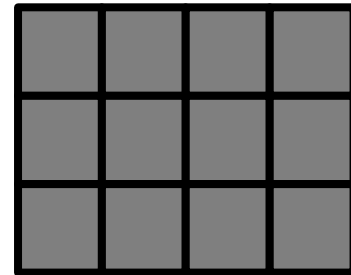
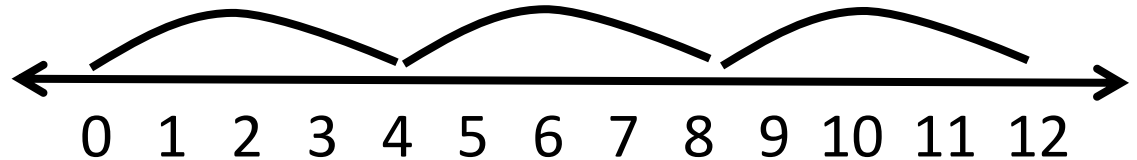
$$3 \times 4 = 12$$

$$3(4) = 12$$

$$3 \bullet 4 = 12$$

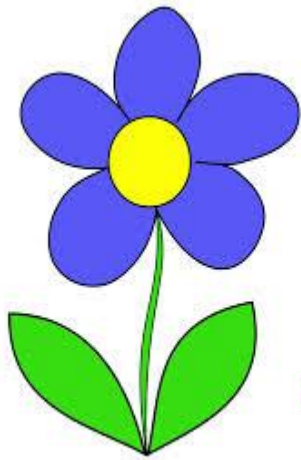
$$3 \times 4 = 4 + 4 + 4$$

Component Parts:
factor x factor = product

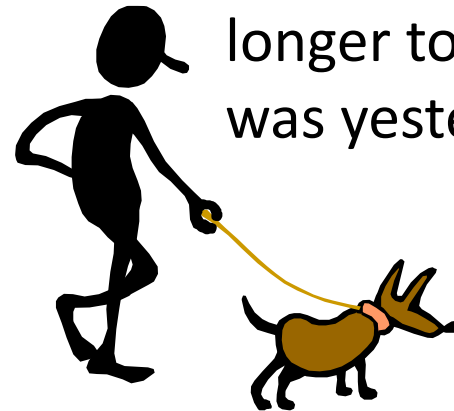


the operation of repeated addition

multiplicative comparison



The first flower is
2 times taller than
the second flower.



The walk was 3 times
longer today than it
was yesterday.

comparing the difference between
values using multiplication

multiplicative identity property of one

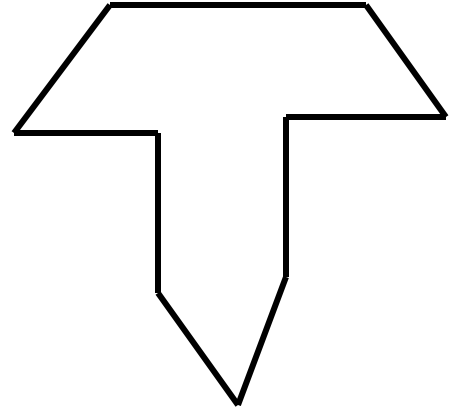
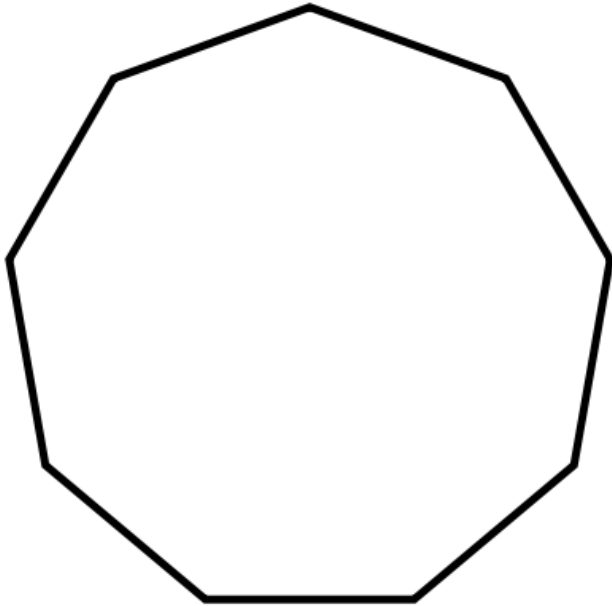
$$7 \times 1 = 7$$

$$12 \times 1 = 12$$

$$n \times 1 = n$$

when a number is multiplied by 1,
the product is that number

nonagon



a polygon with 9 sides

number forms

Standard form: **3045**

Word form: **three thousand, forty-five**

Expanded form: **$3000 + 40 + 5$**

(see *expanded form* card for more examples)

Unit form: **3 thousands 4 tens 5 ones**

number model

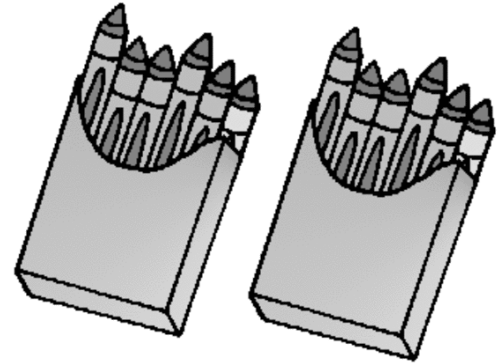


$$1 + 2 = 3$$

1 boy and 2 girls = 3 children

$$2 \times 6 = 12$$

2 groups of 6 crayons = 12 crayons



a mathematical representation of a situation

number sentence

$$5 + 3 = 8$$

$$7 > 4 \times 1$$

$$5 + 2 < 8$$

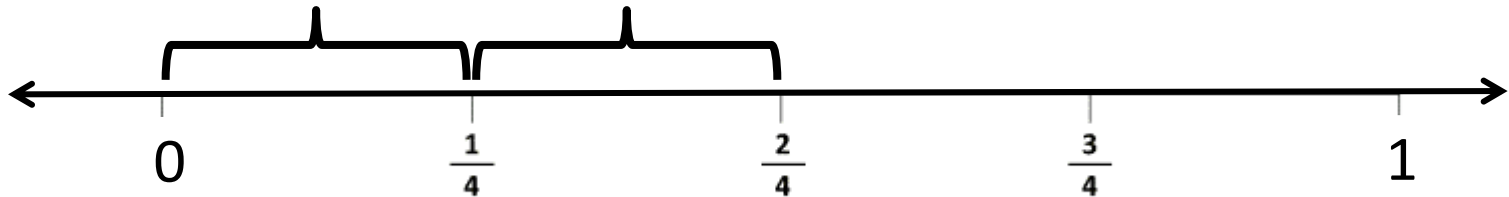
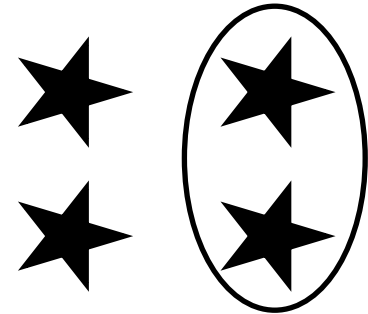
$$5 + 3 \neq 2 + 1$$

an equation (=) or inequality (<, >, ≤, ≥, ≠)
with numbers

numerator

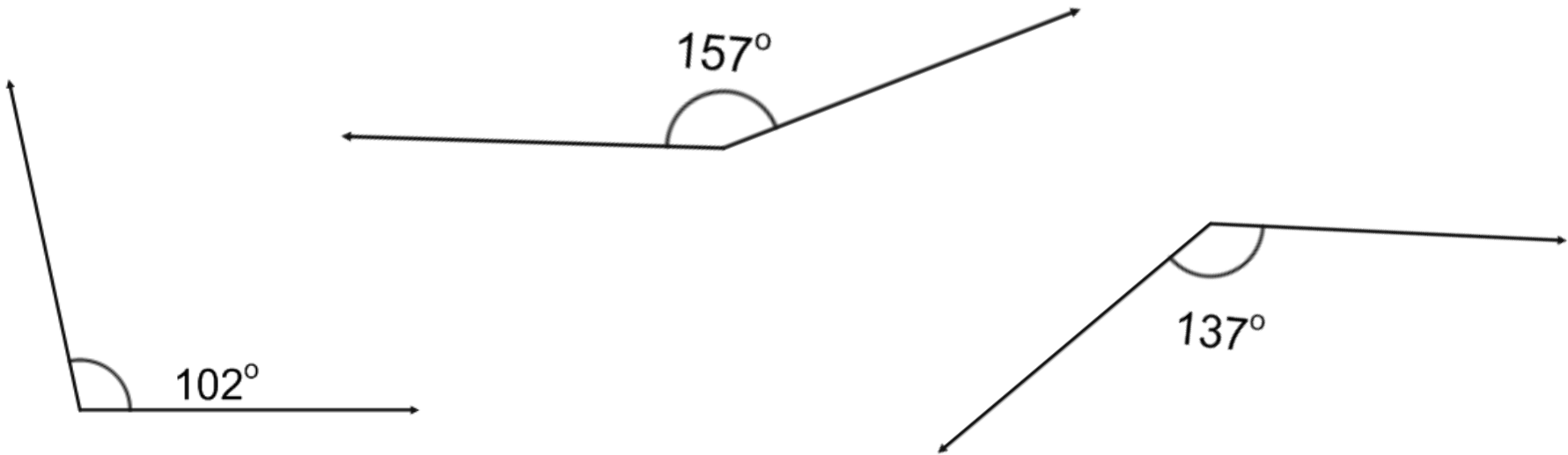
$$\frac{2}{4}$$

← parts described



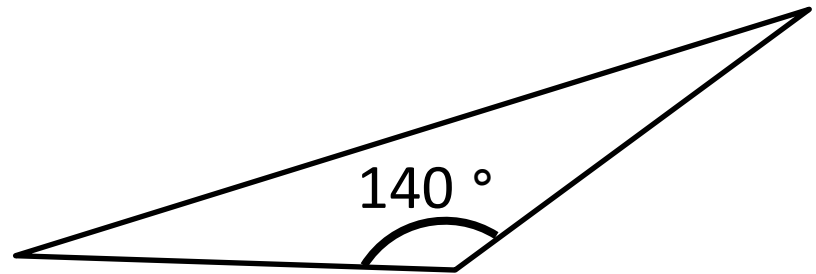
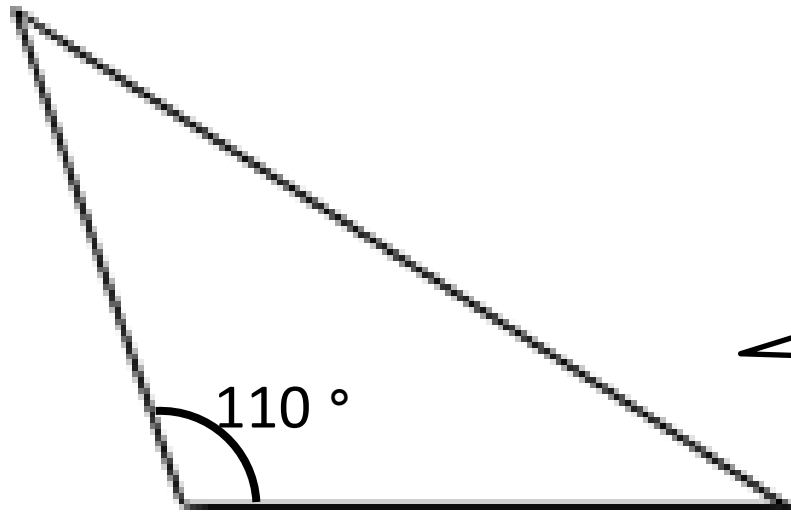
tells how many equal parts of a whole are being described
(the top number of a fraction)

obtuse angle



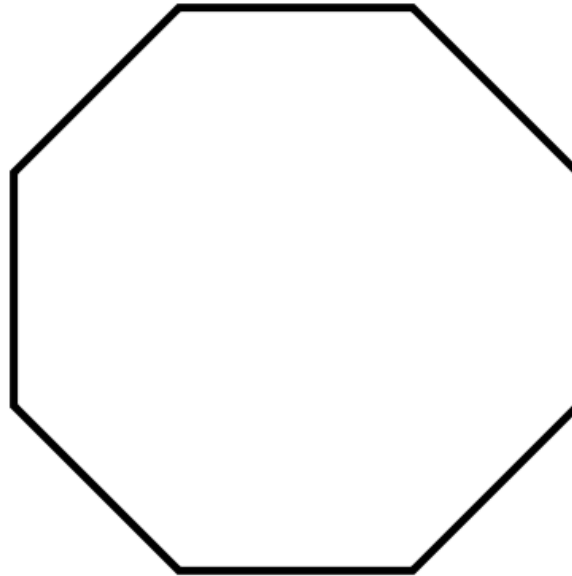
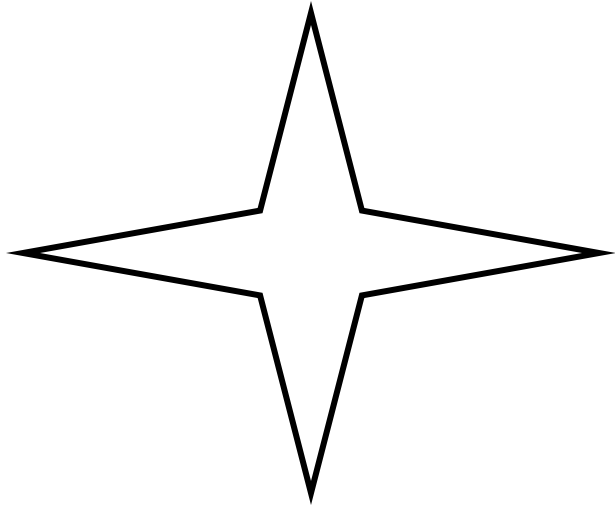
an angle with a measure greater than 90°
and less than 180°

obtuse triangle



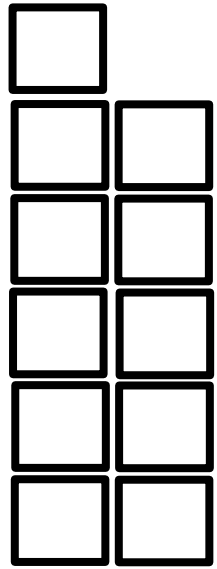
a triangle with an angle measuring
more than 90°

octagon



a polygon with 8 sides

odd number



11

4,283

21

283,005

whole numbers that cannot be divided into 2
equal groups of whole numbers

Hint: odd numbers have 1, 3, 5, 7, or 9 in the one's place

operational symbols

+

X

÷

-

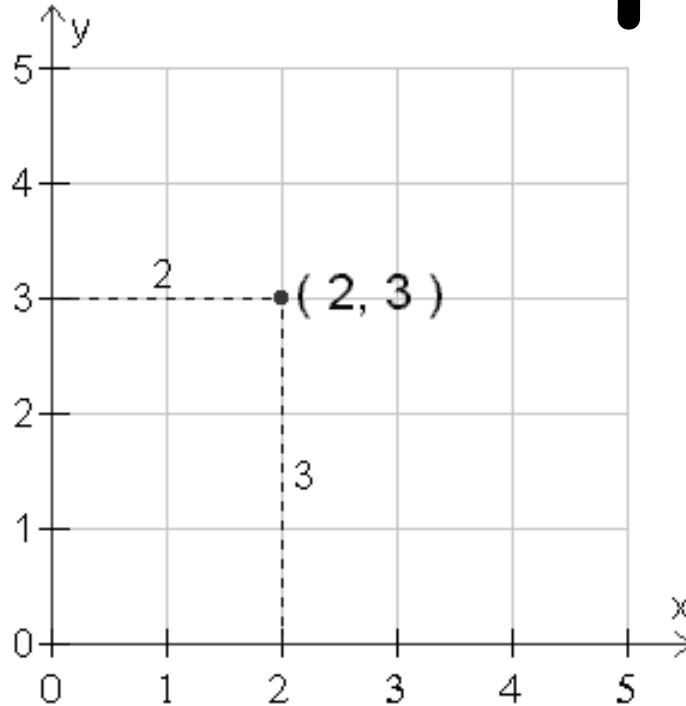
*

•

√

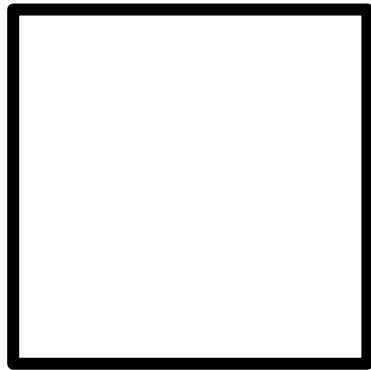
symbols used to indicate computation

ordered pair

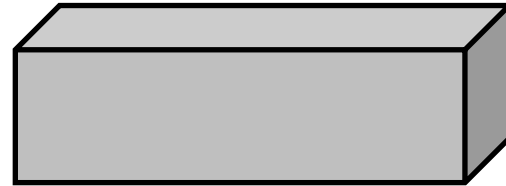
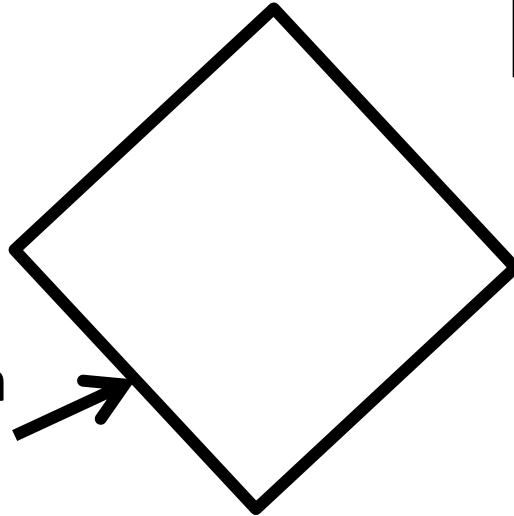


a pair of numbers that gives the coordinates of a point on a grid in this order:
(horizontal coordinate, vertical coordinate)

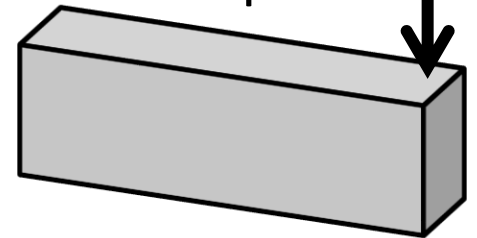
orientation



↑
Square – even
when rotated



← rectangular
prism

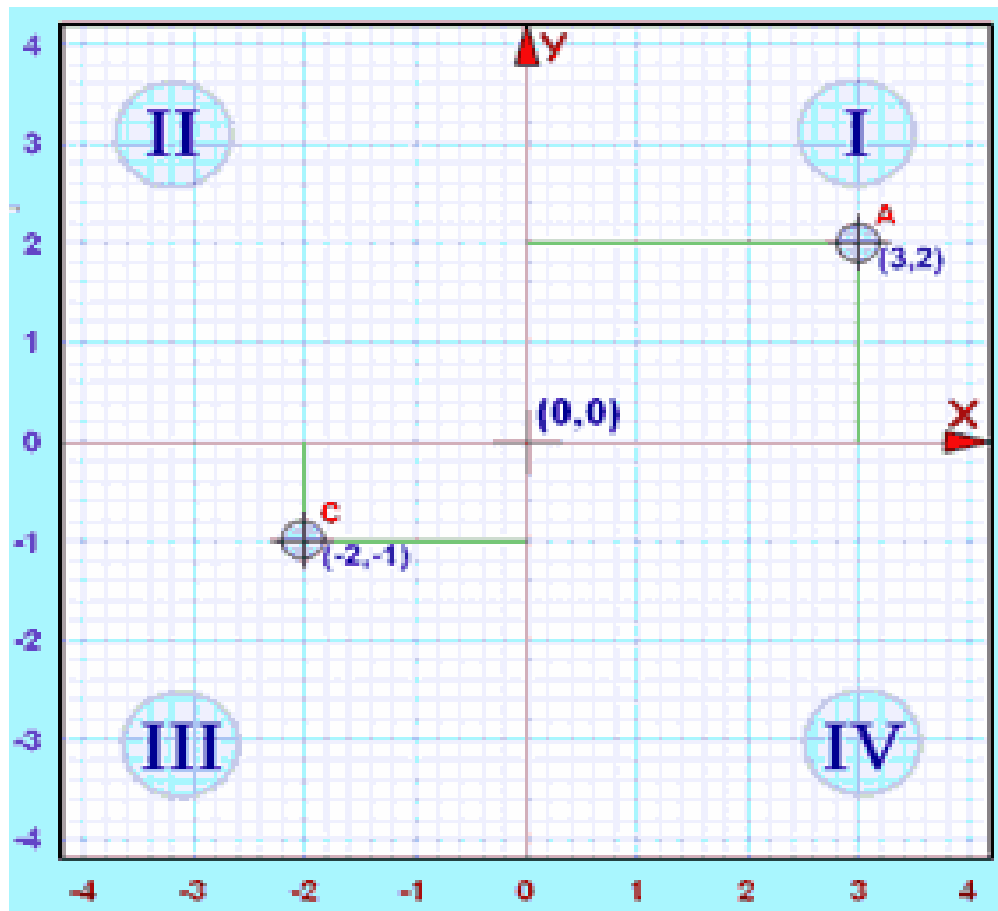


position and direction in space

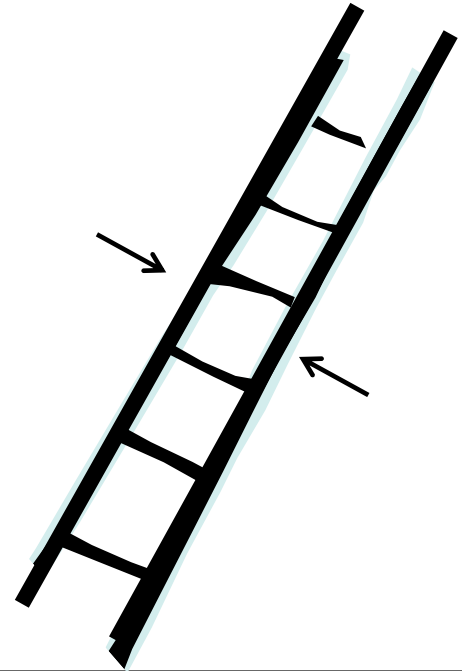
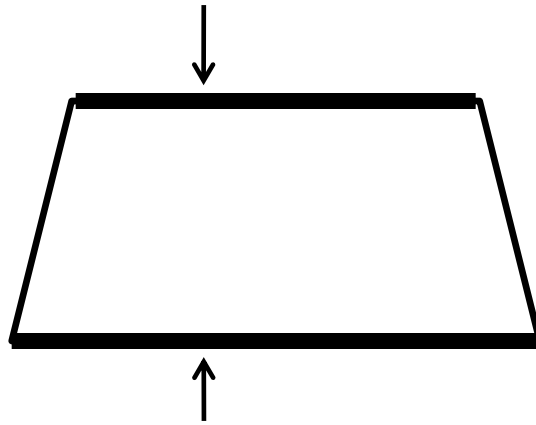
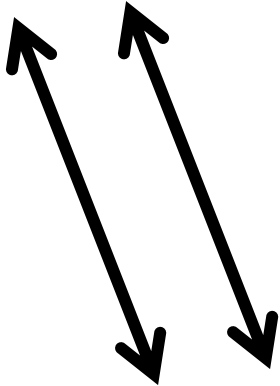
Origin

The starting point.

- On a number line it is 0
- On a two-dimensional graph it is where the X axis and Y axis cross, marked $(0, 0)$ on the graph here:
- In three dimensions it
- is the point $(0, 0, 0)$
- Often written as the letter O

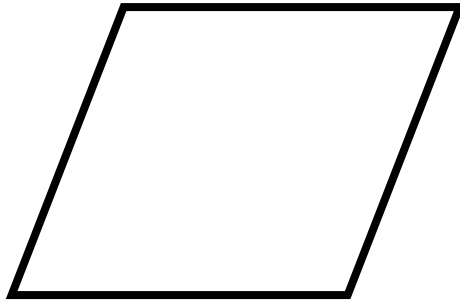


parallel lines



lines that are always the same distance apart and will never intersect

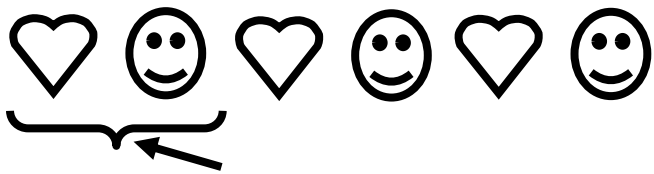
parallelogram



a quadrilateral with two pairs of
parallel sides

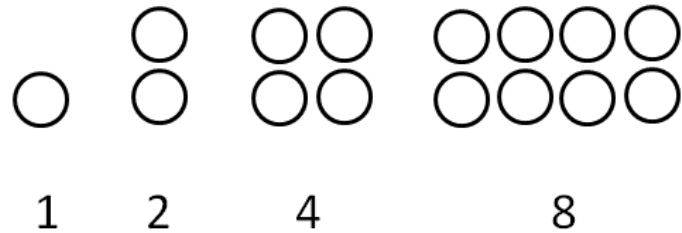
pattern

repeating



Core (or unit) of the repeating pattern.

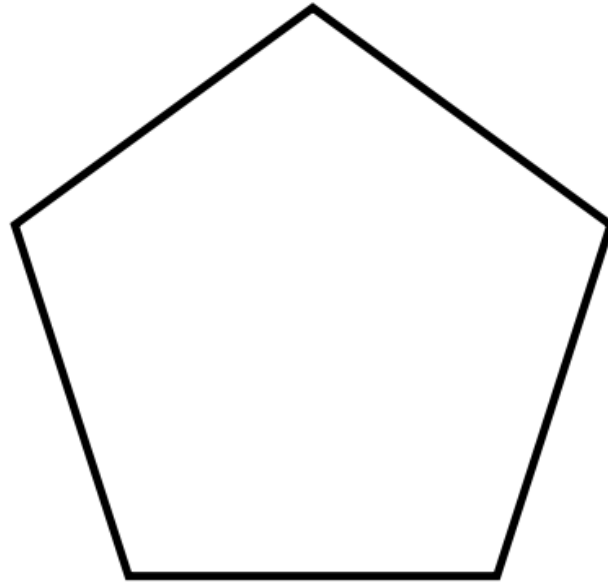
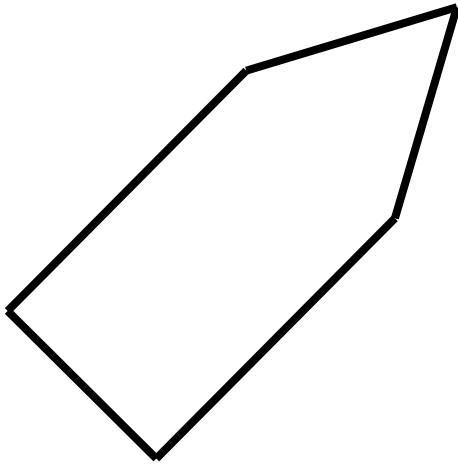
growing



This pattern is following a "x2" rule.

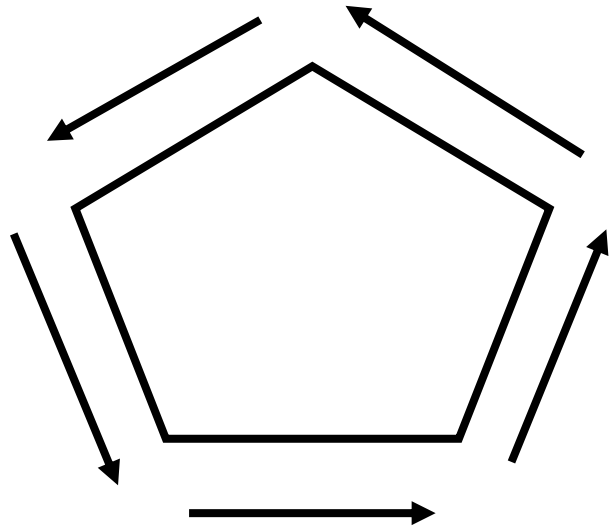
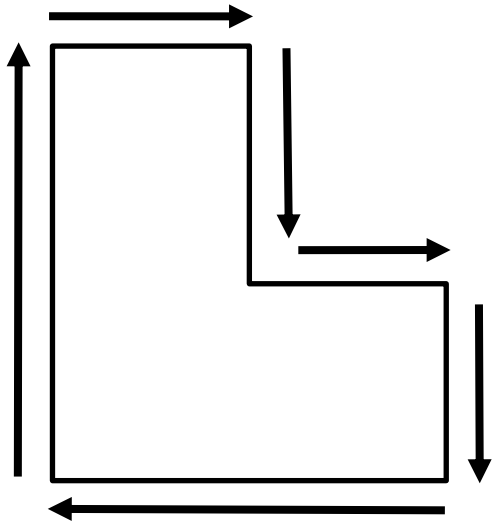
a logical sequence of numbers,
pictures, shapes, or symbols

pentagon



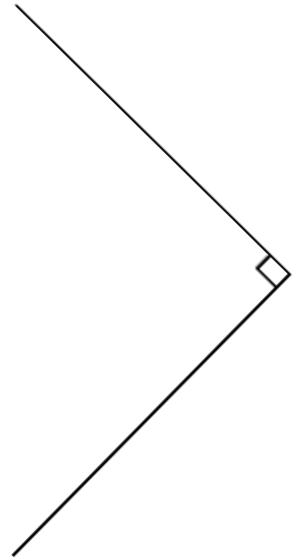
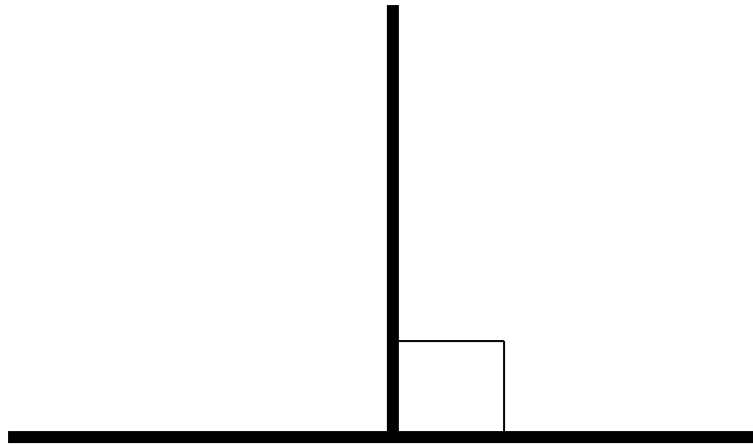
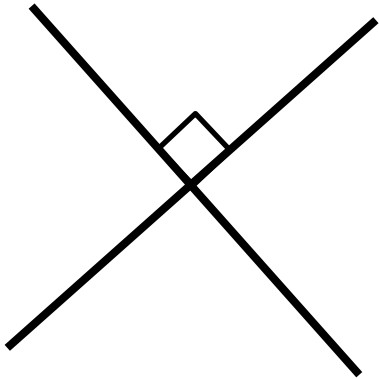
a polygon with 5 sides

perimeter



the distance around a figure

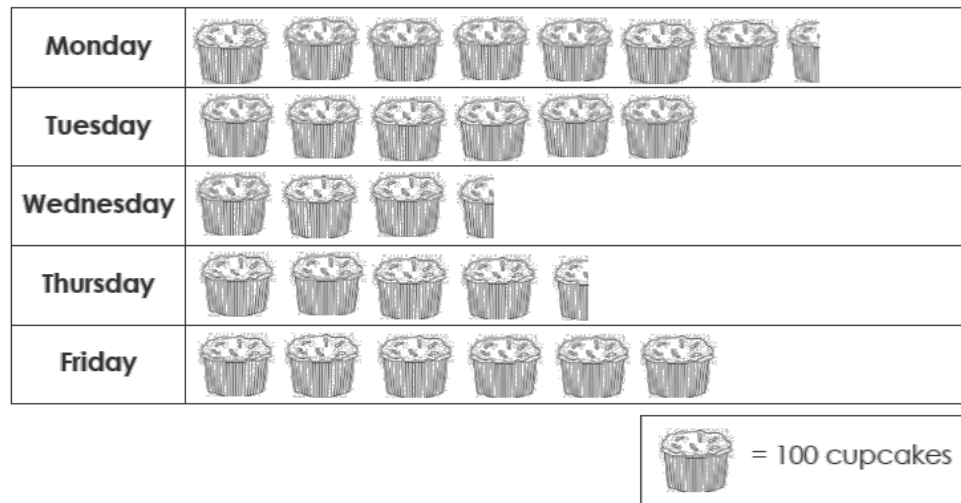
perpendicular lines



two lines that form a right angle
where they intersect

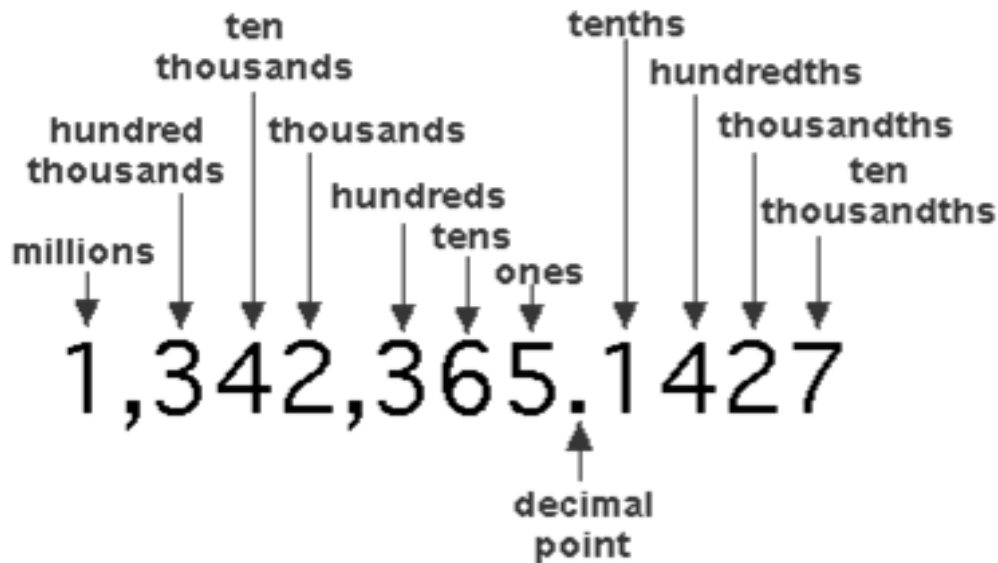
pictograph

Number of Cupcakes Baked



a display that uses pictures or symbols to represent data

place value



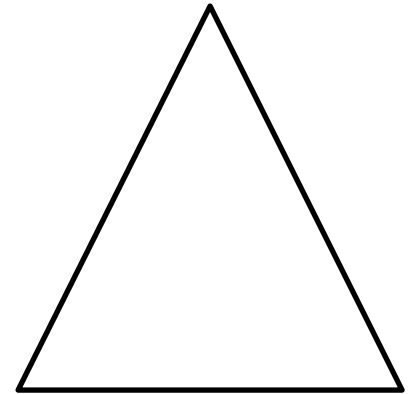
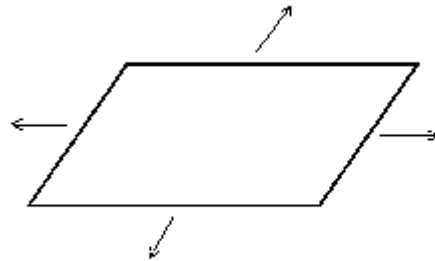
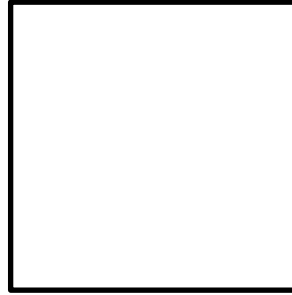
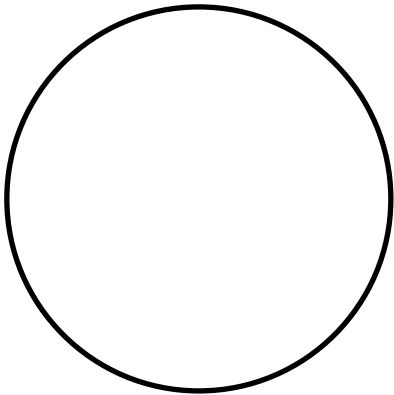
2,365

↓

3 units of size 100
30 units of size 10
300 units of size 1

the value of a digit depending on
its place in a number

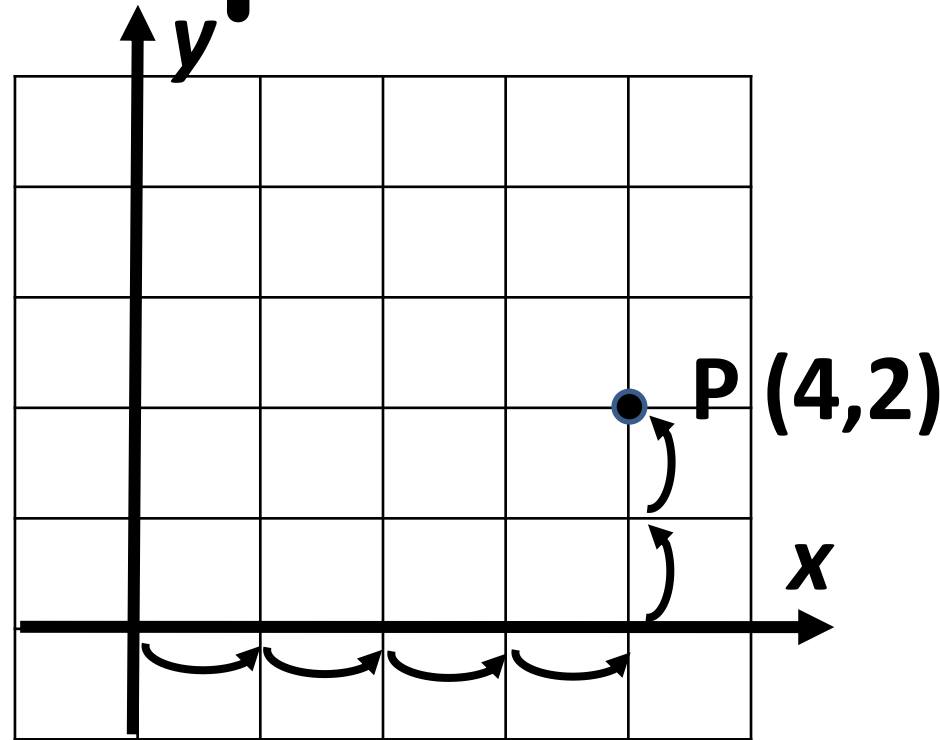
plane figures (2-D)



any 2-dimensional shape that lays in a single
plane

a flat surface extending infinitely in all
directions

plot



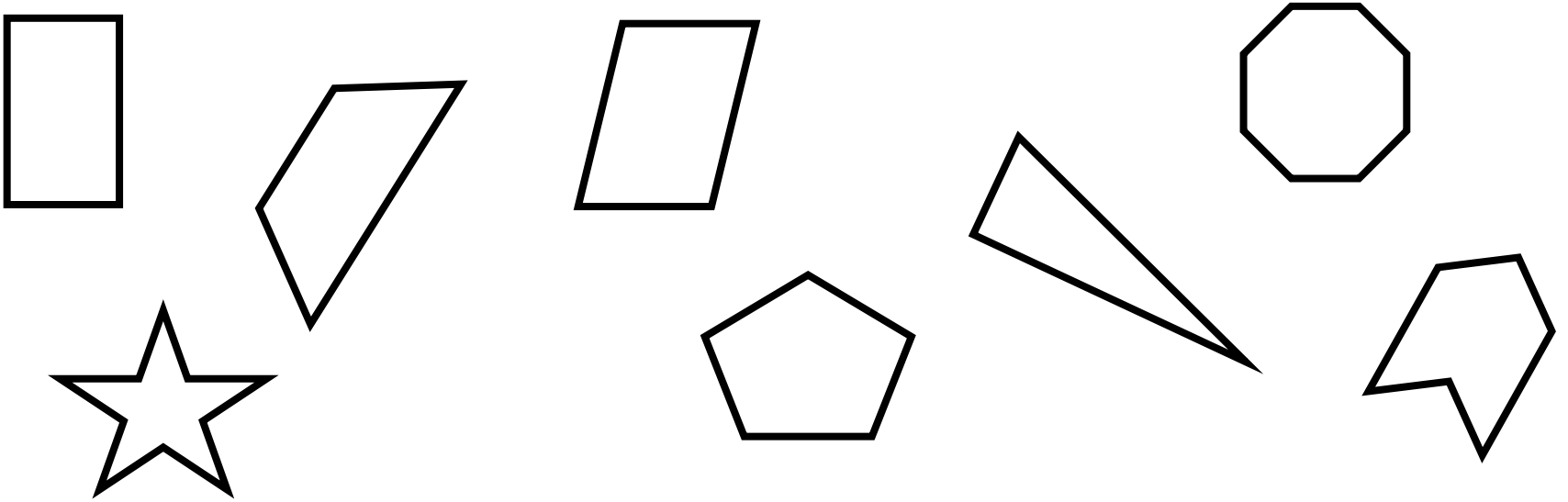
to place (points or other figures) on
a graph by means of coordinates

point



an exact location in space

polygon

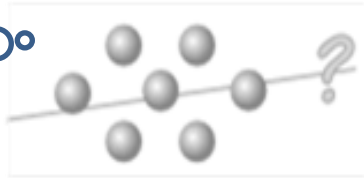


a closed plane figure made from line segments that meet at endpoints and do not cross

prime number

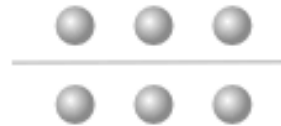
prime number

7 **cannot** be
divided into
equal groups

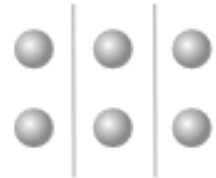


factors of 7: 1, 7

NOT a prime number



divided into 2 groups

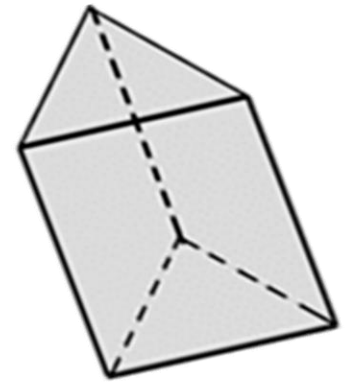
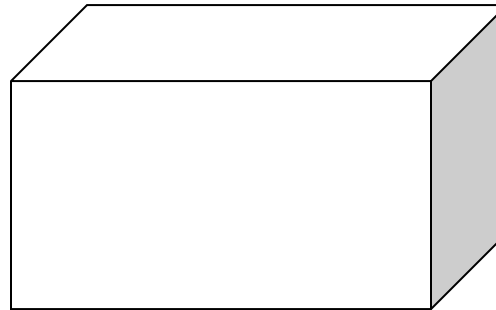


divided into 3 groups

factors of 6: 1, 2, 3, 6

a counting number greater than 1 that has
exactly two factors, itself and 1

prism



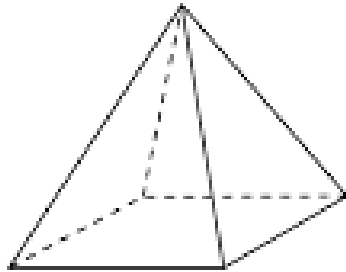
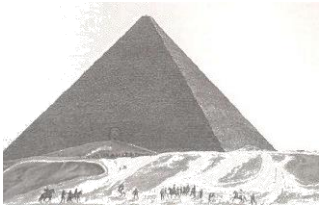
a 3-dimensional figure with two identical, parallel faces (bases) that are polygons; the remaining faces are parallelograms

* A prism is named by its base.

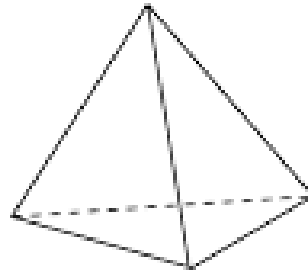
procedural fluency

refers to knowledge of procedures,
knowledge of when and how to use them
appropriately, and skill in performing them
flexibly, accurately, and efficiently

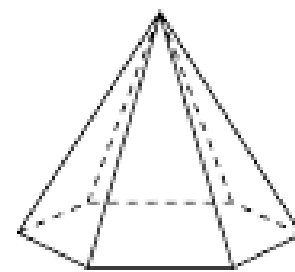
pyramid



square-based
pyramid



triangular-based
pyramid

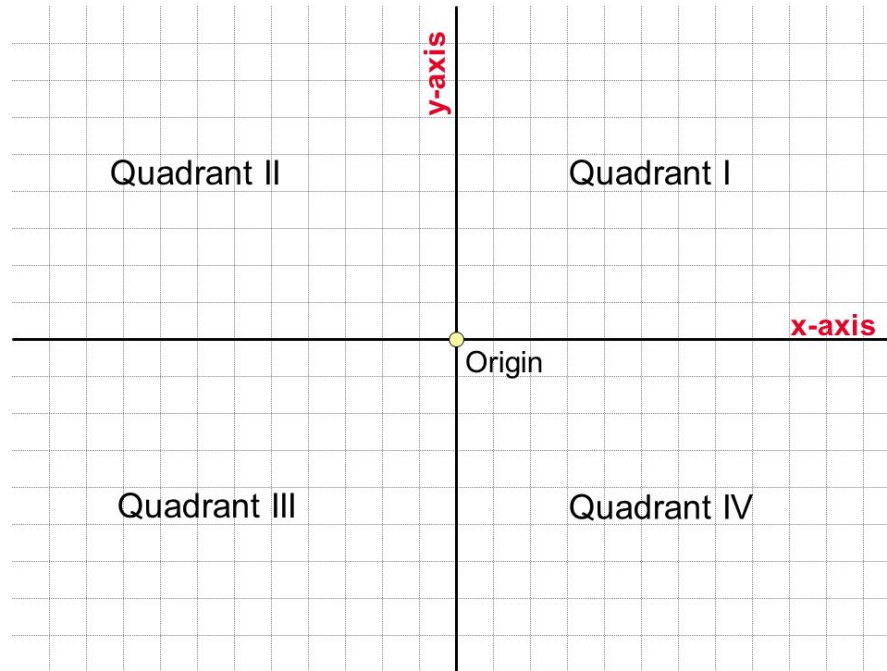


hexagonal-based
pyramid

a 3-dimensional figure whose base is a polygon
and whose other faces are triangles that
share a common vertex

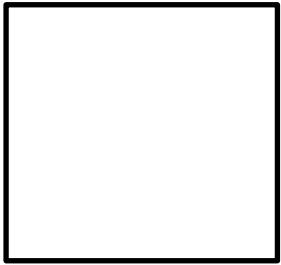
* A pyramid is named by its base.

quadrant



one of four equal parts of a coordinate plane created by the intersection of the x and y axes

quadrilateral



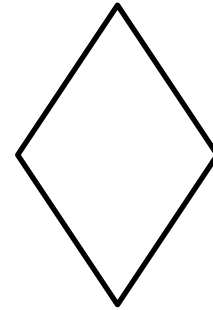
square



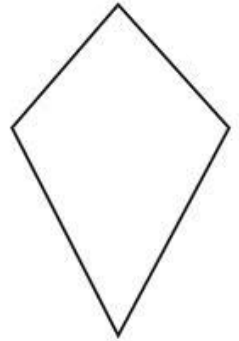
rectangle



parallelogram



rhombus



kite

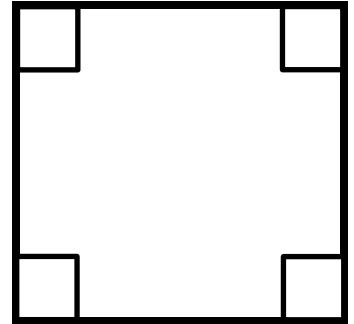
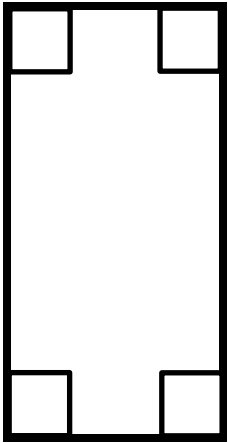
a polygon with 4 sides

ray



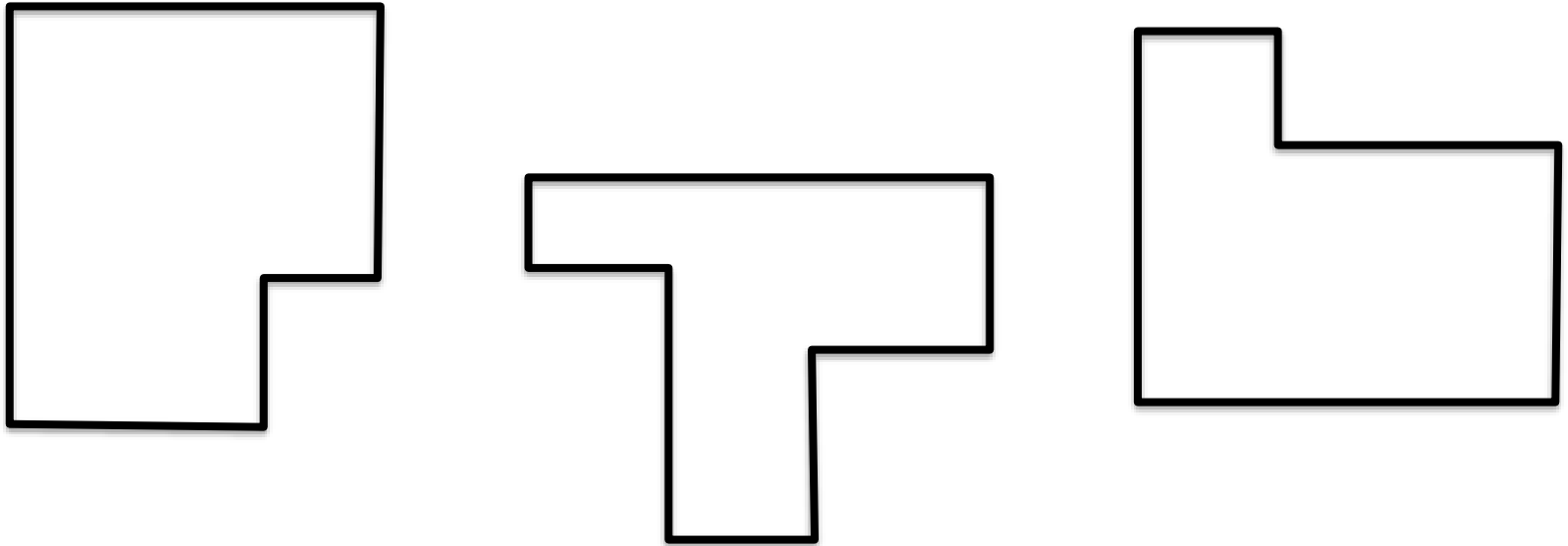
a part of a line that has one endpoint
and extends forever in one direction

rectangle



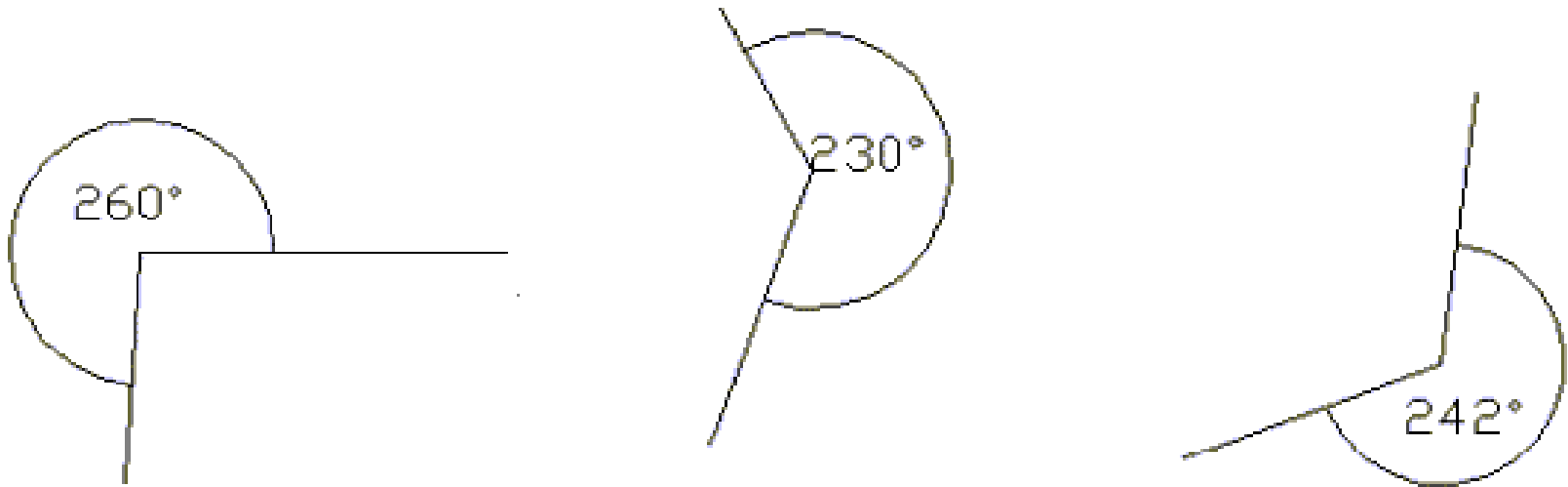
a quadrilateral with 4 right angles

rectilinear polygon



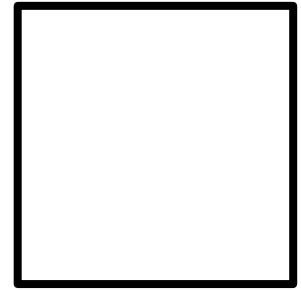
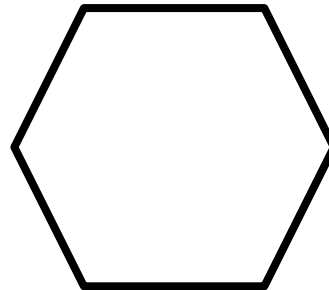
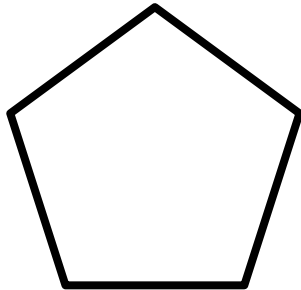
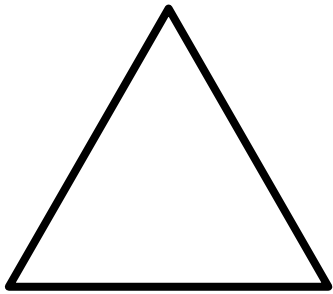
a polygon whose edges meet at right angles

reflex angle



an angle that measures greater than 180°

regular polygon



a polygon with all sides the same length
and all angles the same measure

related equations

(fact families)

addition/subtraction

multiplication/division

$$7 + 4 = 11 \quad 11 - 7 = 4$$

$$4 + 7 = 11 \quad 11 - 4 = 7$$

$$11 = 4 + 7 \quad 11 = 7 + 4$$

$$7 = 11 - 4 \quad 4 = 11 - 7$$

$$3 \times 4 = 12 \quad 12 \div 3 = 4$$

$$4 \times 3 = 12 \quad 12 \div 4 = 3$$

$$12 = 3 \times 4 \quad 12 = 4 \times 3$$

$$3 = 12 \div 4 \quad 4 = 12 \div 3$$

a set of equations that all communicate the same relationship between three values, but in different ways

relational symbols

=

≠

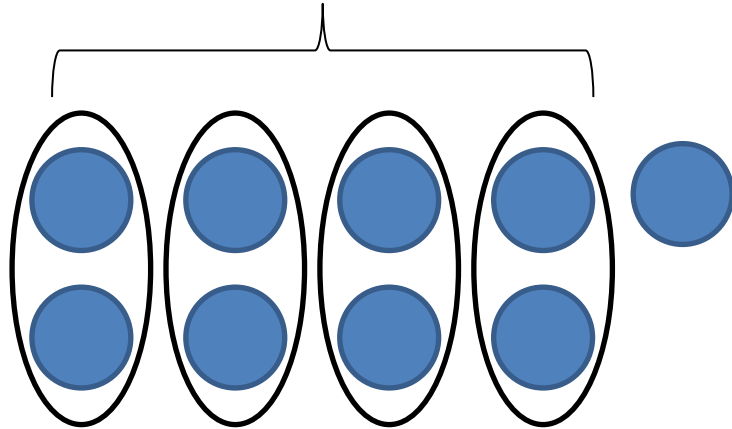
<

>

symbols used to show equalities and
inequalities between quantities and values

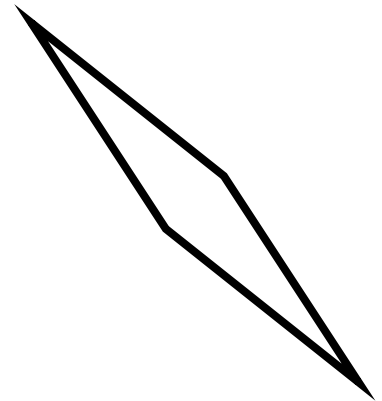
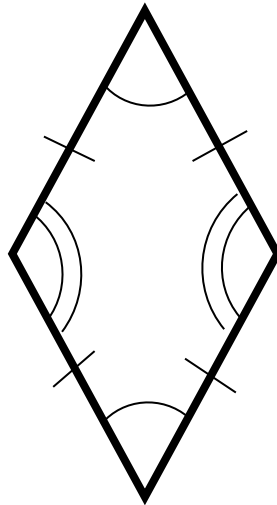
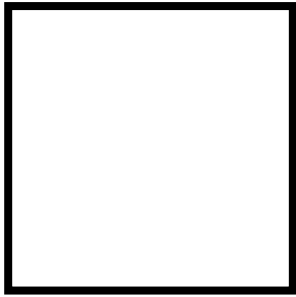
remainder

$$9 \div 2 = 4 \text{ r } 1$$



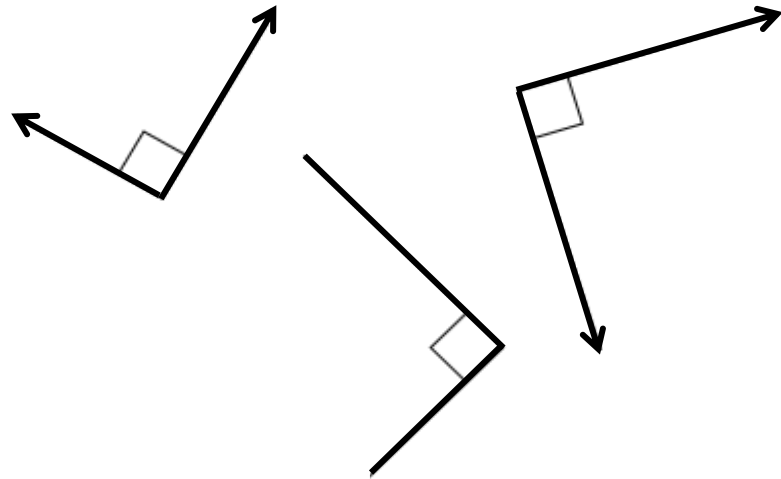
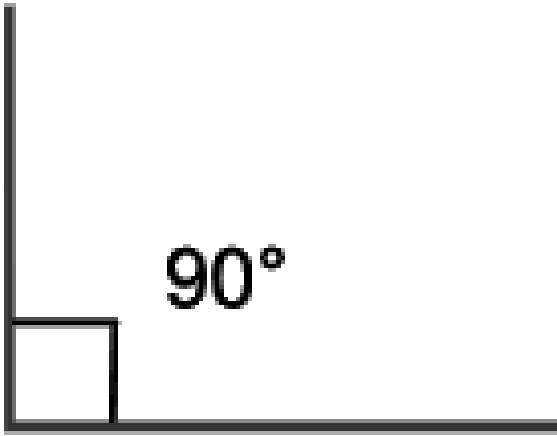
amount leftover after dividing a number

rhombus



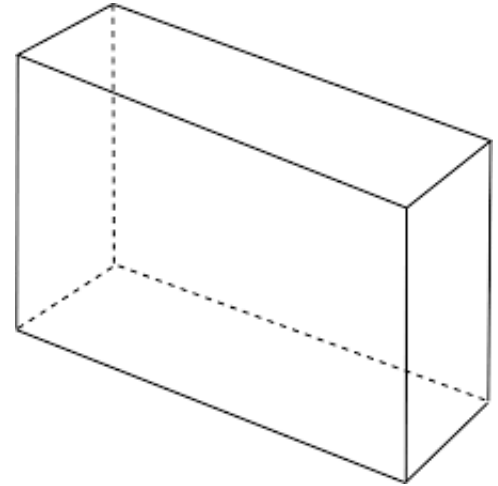
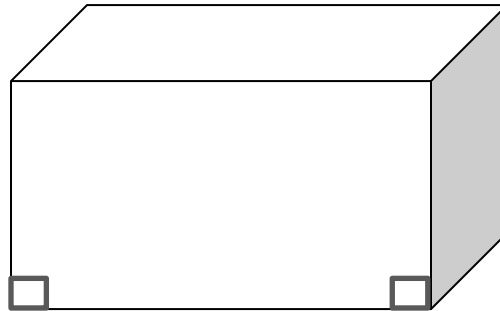
a parallelogram with equal sides and
opposite angles equal

right angle



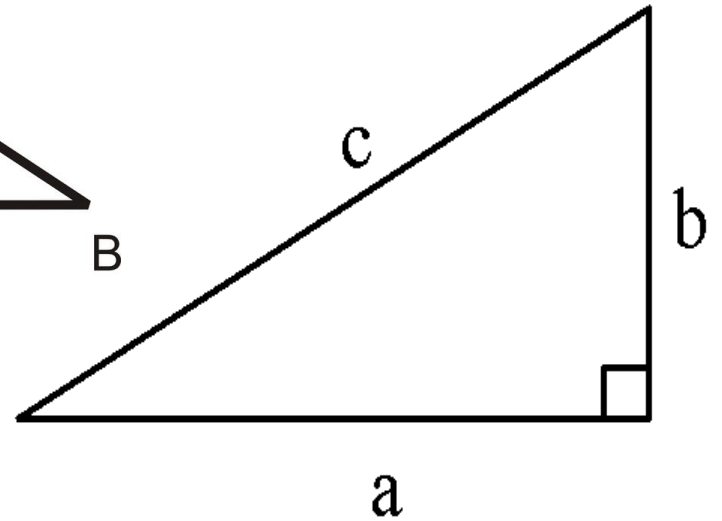
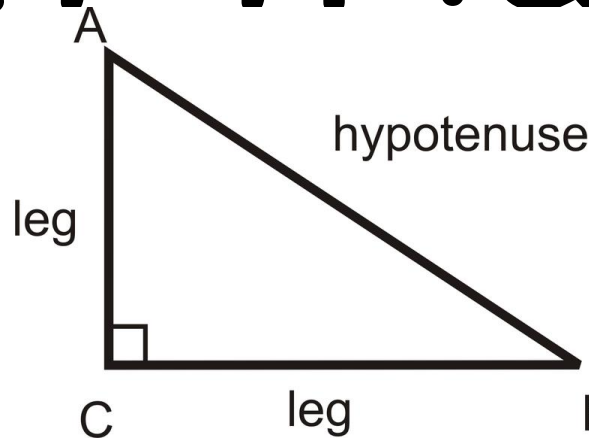
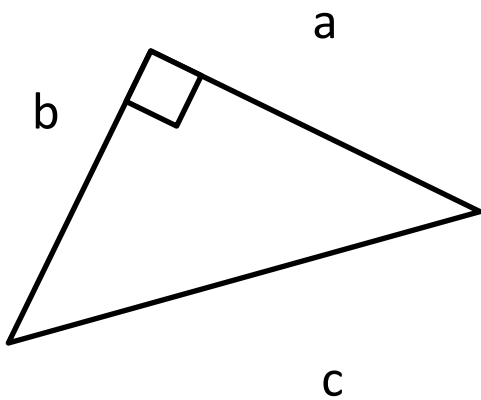
an angle that measures 90°

right rectangular prism



a 3-dimensional figure with two identical, parallel faces (bases) that are rectangles; the remaining faces are parallelograms and *are perpendicular* to the faces (bases)

right triangle



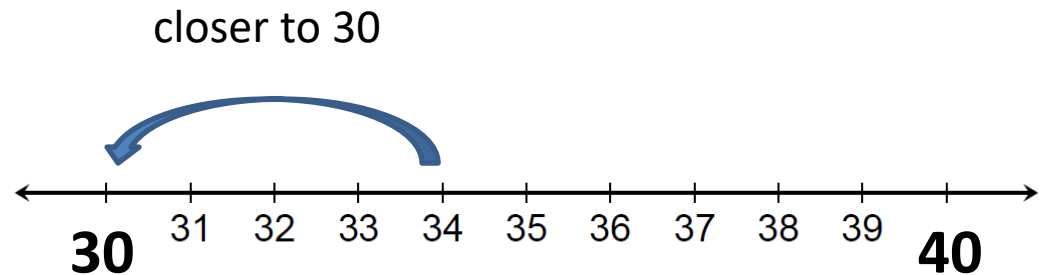
a triangle that has one 90° angle

rounding

34

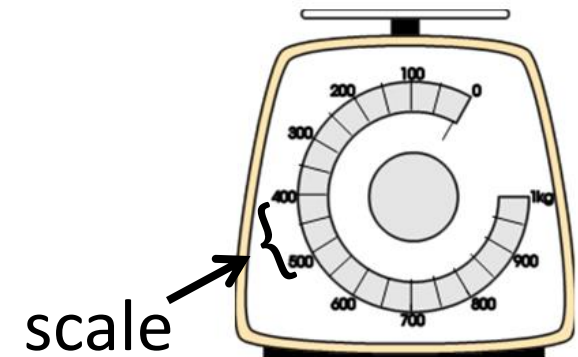
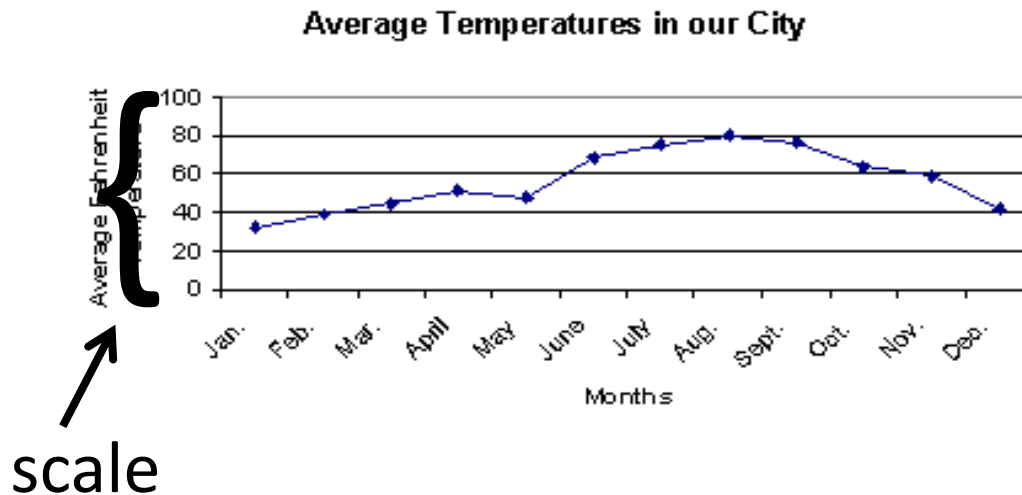
rounds to

30



to adjust a number so it is easier to work with based on a given place value

scale



ordered marks at fixed intervals
(graphing or measurement)

scaling resizing



this is $\frac{1}{2}$ the size
of the original bear



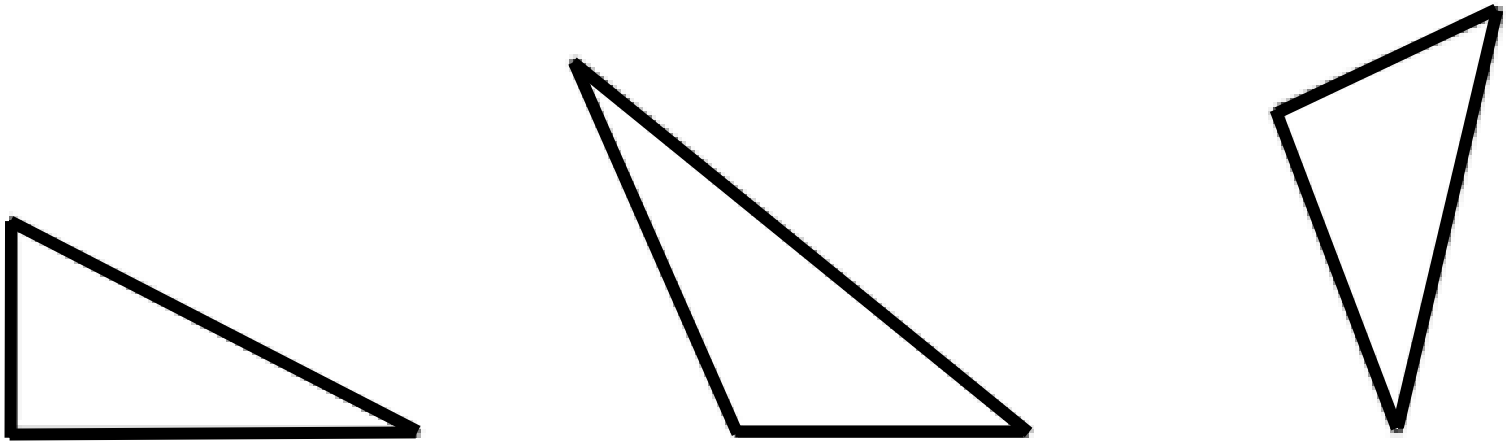
original bear



this is 2 times the size
of the original bear

expressing the amount of the
enlargement or reduction
to the original

scalene triangle



a triangle having no equal sides

situation equation

solution equation

A boy had some balloons and his dad gave him 2 more so he has 8. How many balloons did he start with?

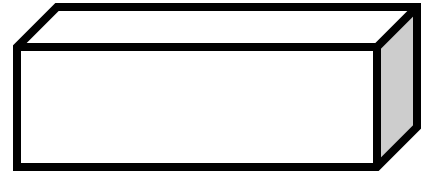
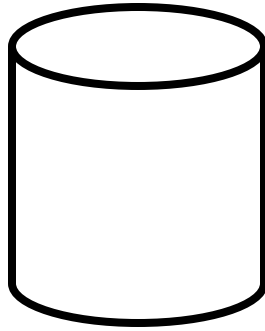
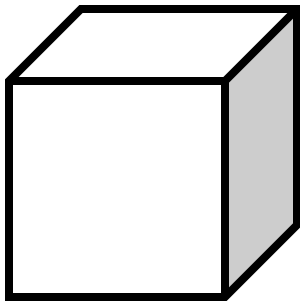
$$? + 2 = 8$$

$$8 - 2 = ?$$

an equation that **models** the situation in a real-life and/or word problem

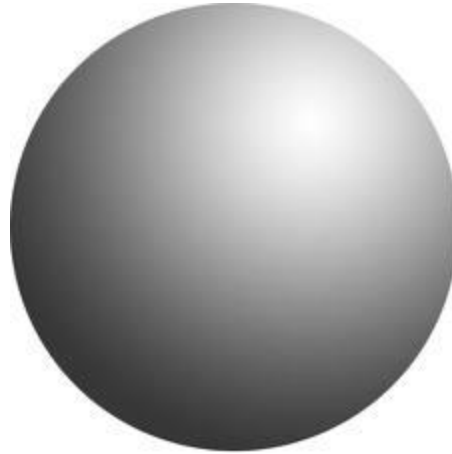
an equation that models how the situation in a real-life and/or word problem can be **solved**

solid figures (3-D)



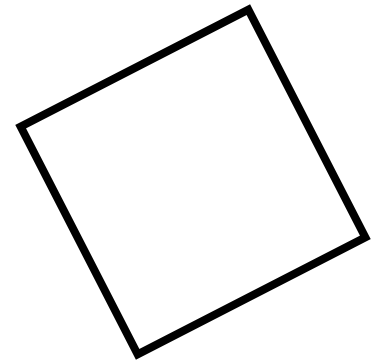
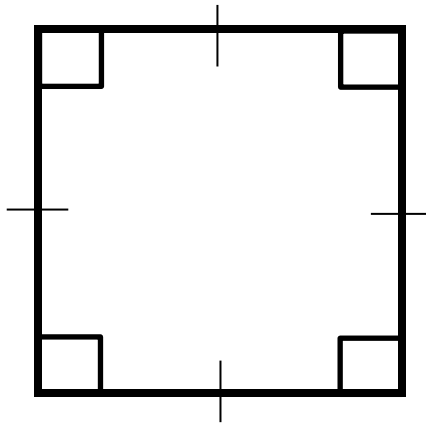
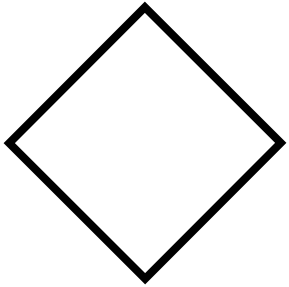
a geometric figure with three dimensions
(length, width, and height)

sphere



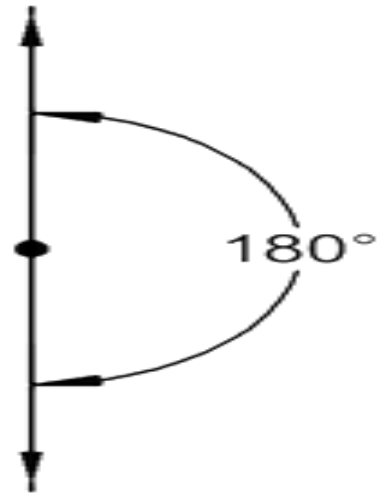
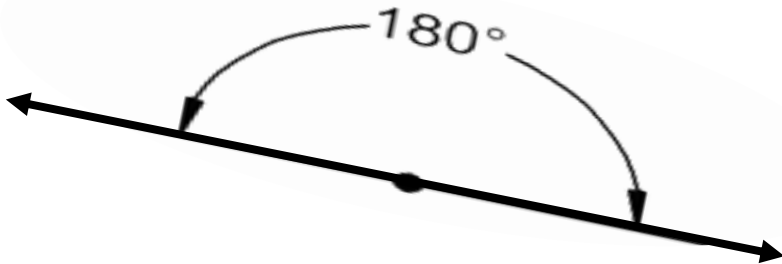
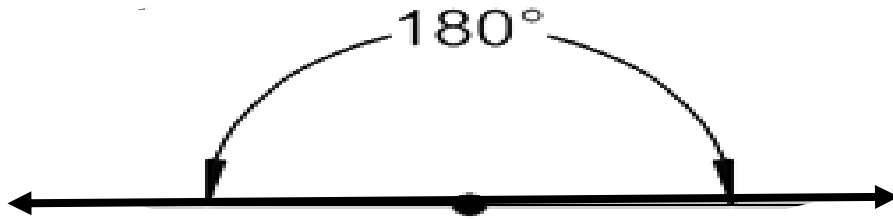
a 3-dimensional figure that is
perfectly round

square



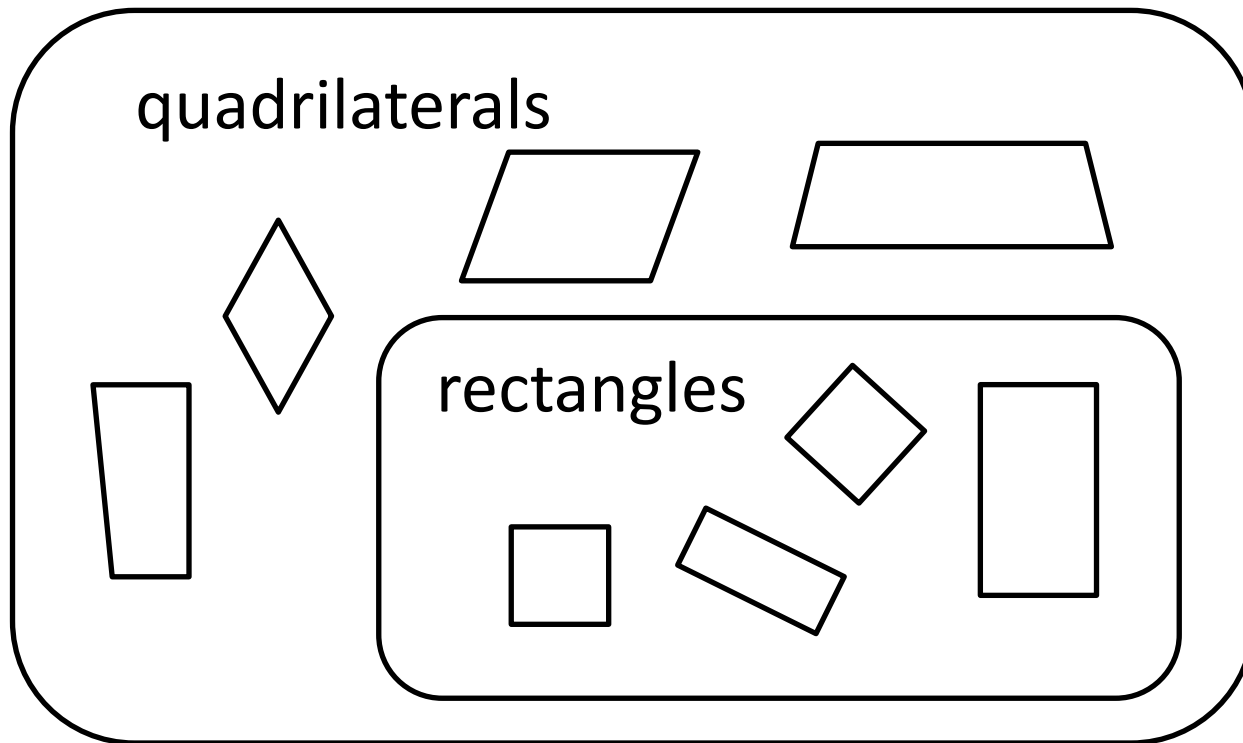
a parallelogram with equal sides and
four right angles

straight angle



an angle with a measure of 180°

subset



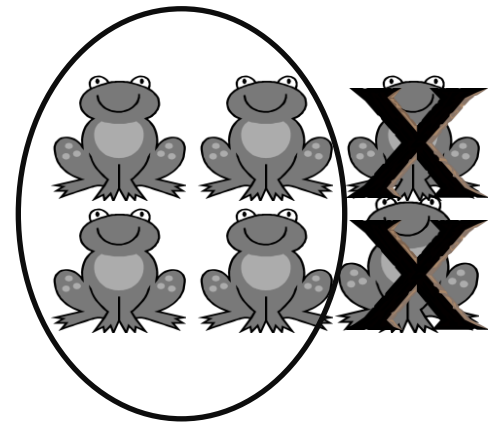
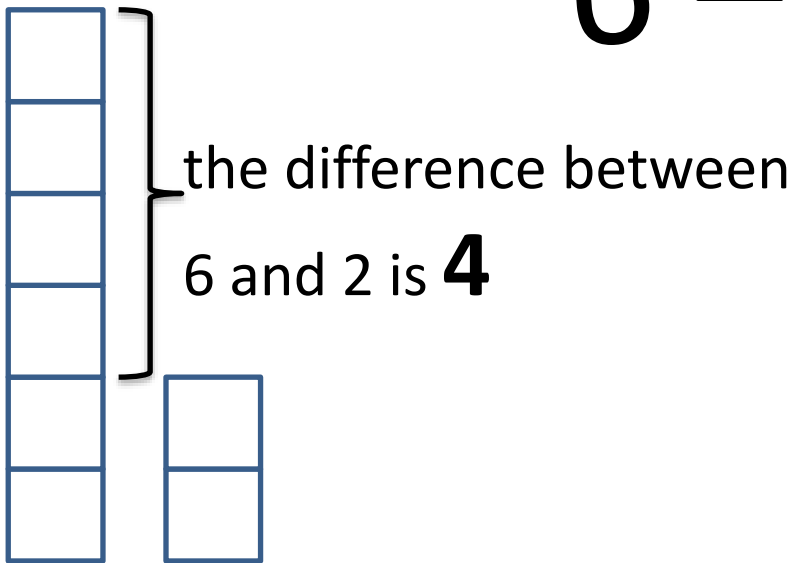
Rectangles are
a subset of all
quadrilaterals.

a set within a larger set

subtraction

component parts: minuend - subtrahend = difference

$$6 - 2 = 4$$



an operation that gives the difference
or comparison between two numbers

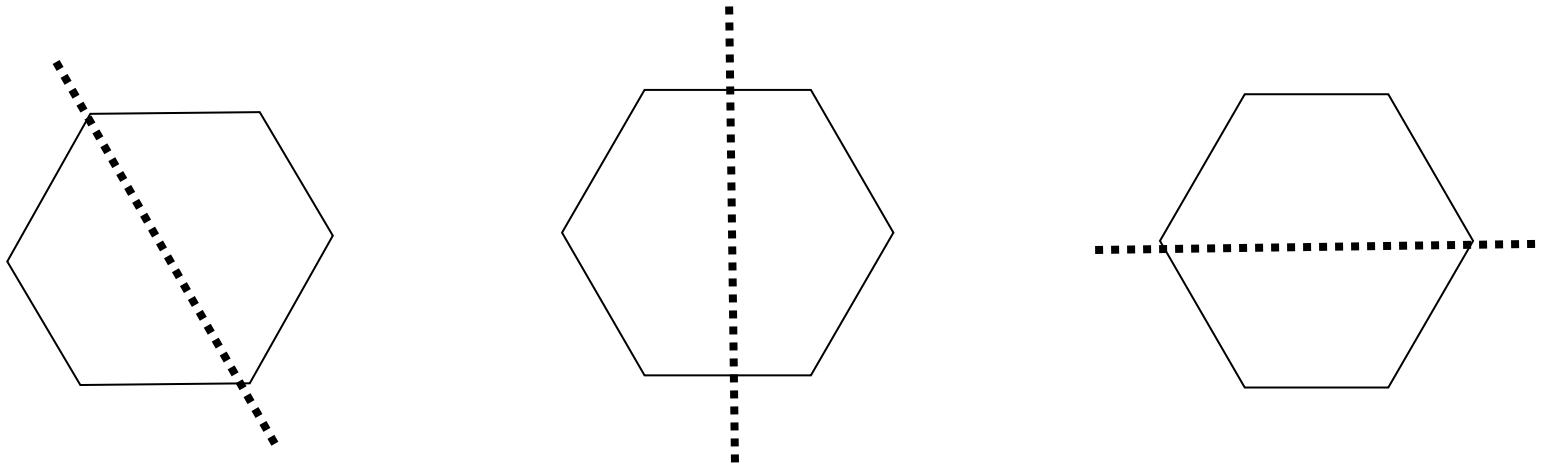
symmetric property of equality

$$80 + 20 = 100$$

$$100 = 80 + 20$$

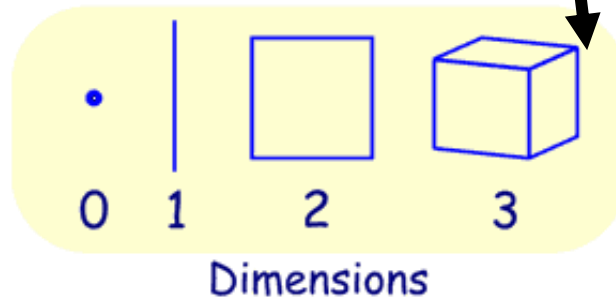
the answer to an equation can be on
either side of the equal sign

symmetry (line symmetry)



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

three dimensional



having three dimensions: length, width,
and height

time

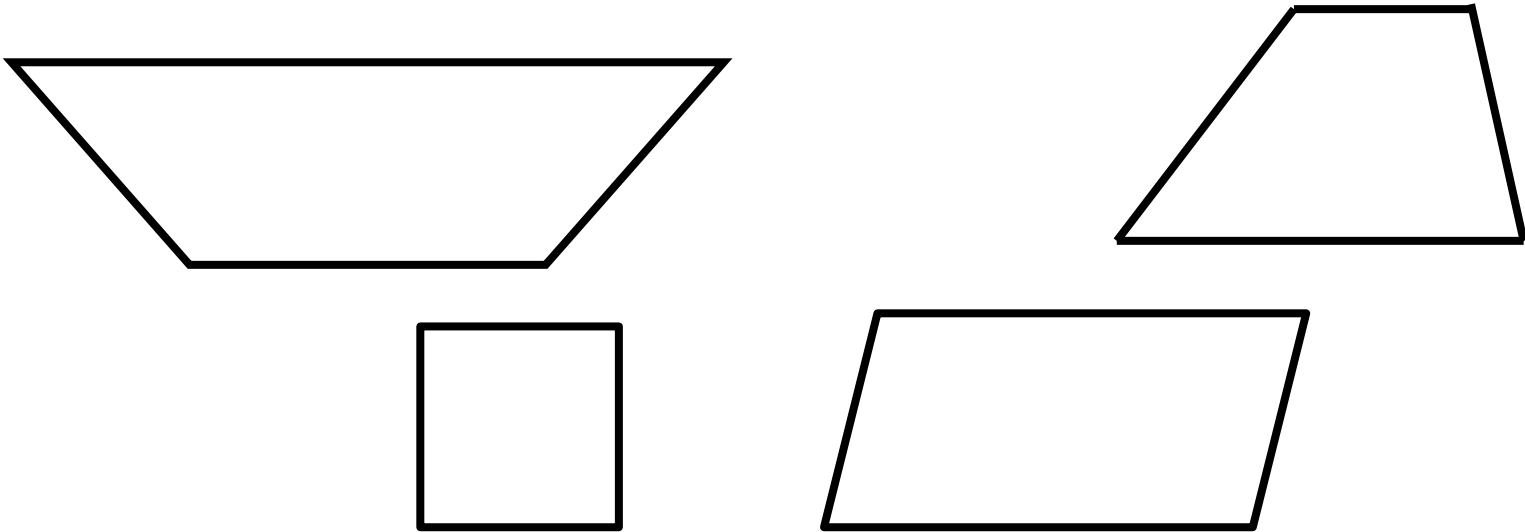


April 2009						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		



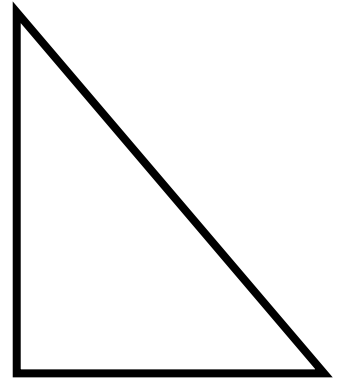
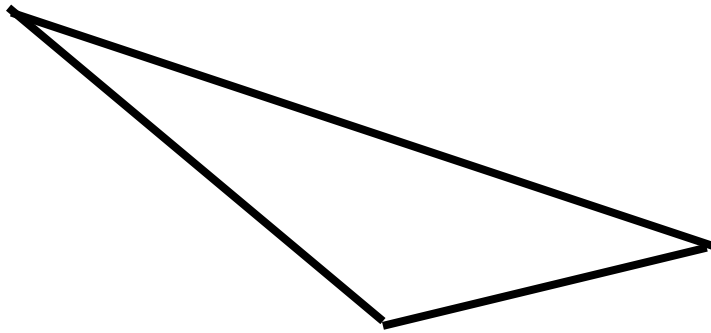
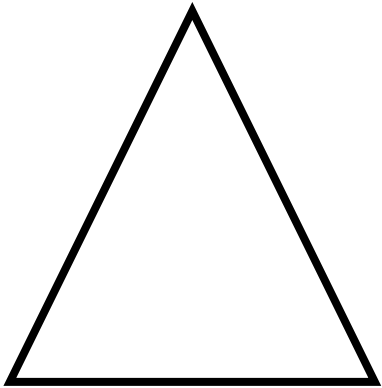
the way we measure years, days,
minutes, etc.

trapezoid



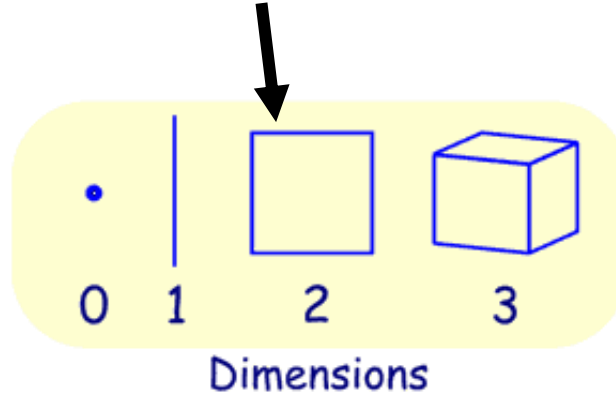
a quadrilateral with *at least one*
pair of parallel sides

triangle



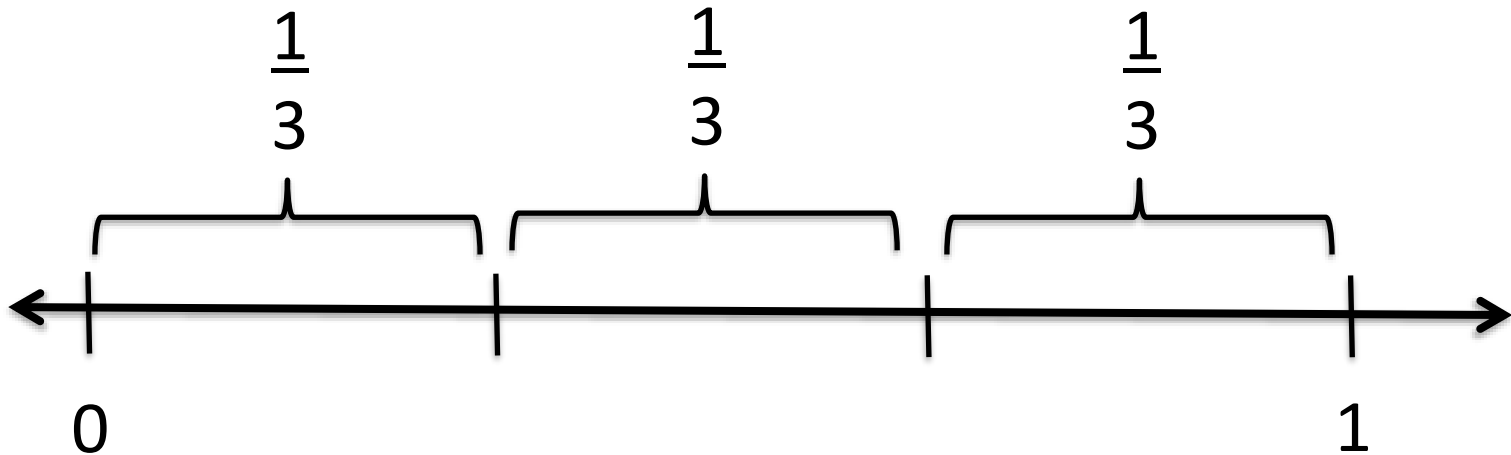
a polygon with 3 sides

two dimensional



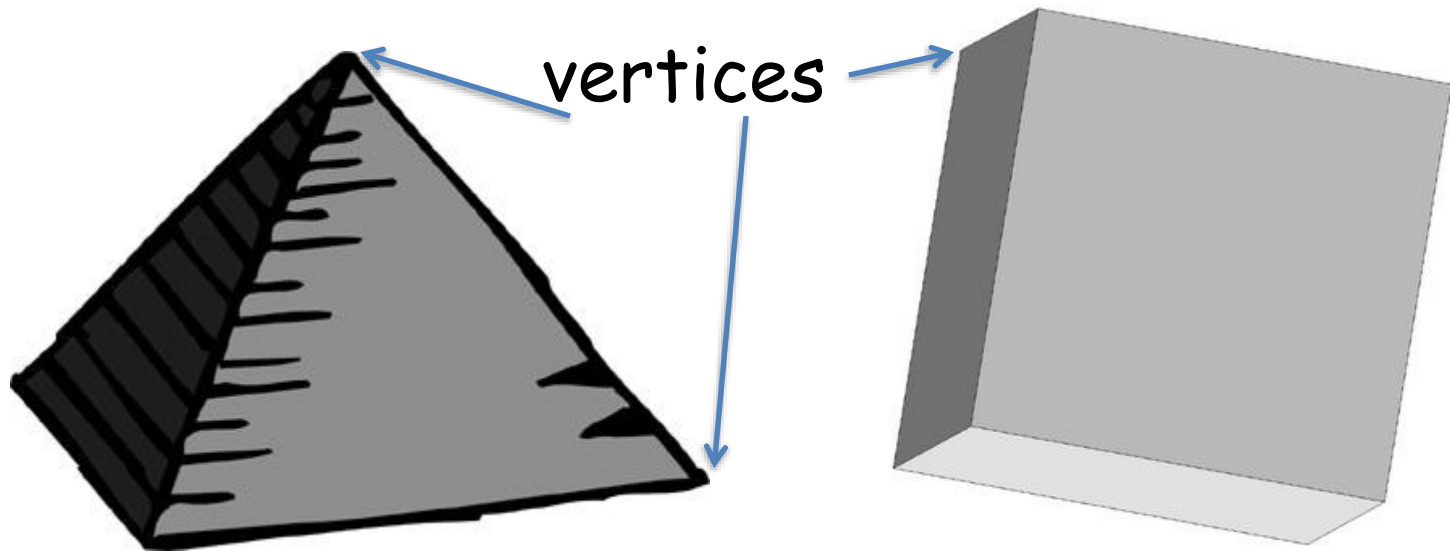
having two dimensions, length and width

unit fraction



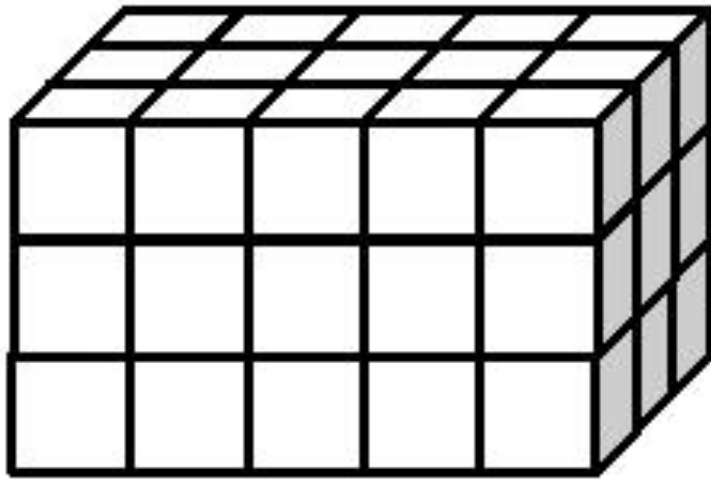
when a whole is divided into equal parts, a unit fraction is one of those parts.
(A unit fraction has a numerator that is 1.)

vertex



the point at which two line segments, lines,
or rays meet to form an angle

volume

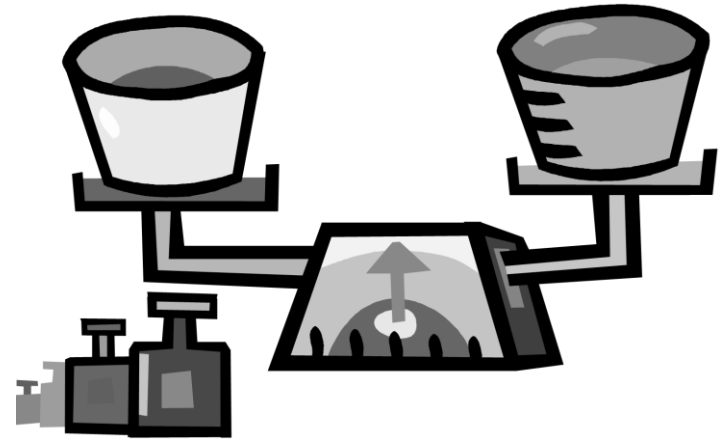


the number of cubic units it takes
to fill a 3-dimensional figure

weight



mass



the measure of how heavy something is; the force of gravity on an object

the amount of matter

whole number

0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10,
11, 12, 13, 14...

counting numbers and zero

width



the measure of one side of an object, typically the shorter side

zero property

(multiplication property of zero)

Example:

$$0 \times 3 = 0$$

Zero groups of 3 equals Zero

$$3 \times 0 = 0$$

3 groups of zero equals zero

when a number is multiplied by 0,
the product is always 0