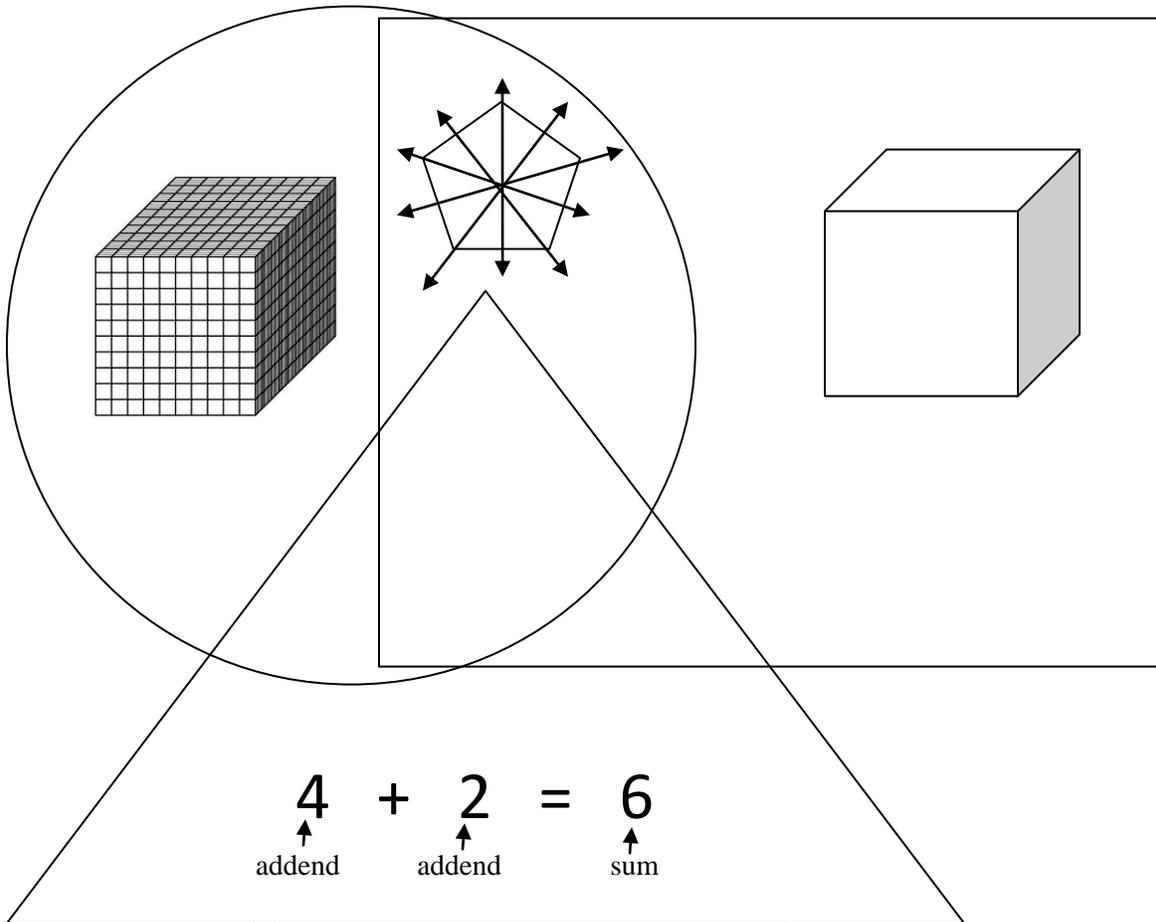


Fountain Valley School District

Mathematics

(Toán Học)



Compiled by (Soạn bởi)

Huong Dao

Tamura School

February 2013

Addition

$$\begin{array}{ccccccc} 4 & + & 2 & = & 6 \\ \uparrow & & \uparrow & & \uparrow \\ \text{addend} & & \text{addend} & & \text{sum} \end{array}$$

We say, "Four plus two equals six."

$$\begin{array}{r} 4 \leftarrow \text{addend} \\ + 2 \leftarrow \text{addend} \\ \hline 6 \leftarrow \text{sum} \end{array}$$

Key Words:

- in all
- altogether
- total

Subtraction

$$\begin{array}{ccccccc} 6 & - & 1 & = & 5 \\ & & & & \uparrow \\ & & & & \text{difference} \end{array}$$

We say, "Six minus one equals five."

$$\begin{array}{r} 6 \\ - 1 \\ \hline 5 \leftarrow \text{difference} \end{array}$$

Key Words:

- how many more
- how many fewer
- how much less
- how many left

Tính Cộng

$$\begin{array}{ccccccc} 4 & + & 2 & = & 6 \\ \uparrow & & \uparrow & & \uparrow \\ \text{số cộng} & & \text{số cộng} & & \text{tổng số} \end{array}$$

Chúng ta nói, "Bốn cộng hai bằng sáu."

$$\begin{array}{r} 4 \leftarrow \text{số cộng} \\ + 2 \leftarrow \text{số cộng} \\ \hline 6 \leftarrow \text{tổng số} \end{array}$$

Những Từ Dùng Chính:

- trong tất cả
- hoàn toàn
- tổng cộng

Tính Trừ

$$\begin{array}{ccccccc} 6 & - & 1 & = & 5 \\ & & & & \uparrow \\ & & & & \text{hiệu số} \end{array}$$

Chúng ta nói, "Sáu trừ một bằng năm."

$$\begin{array}{r} 6 \\ - 1 \\ \hline 5 \leftarrow \text{hiệu số} \end{array}$$

Những Từ Dùng Chính:

- nhiều hơn bao nhiêu
- ít hơn bao nhiêu
- ít hơn đến mức nào
- còn lại bao nhiêu

Multiplication

$$\begin{array}{ccc} 4 & \times & 2 & = & 8 \\ \uparrow & & \uparrow & & \uparrow \\ \text{factor} & & \text{factor} & & \text{product} \end{array}$$

$$\begin{array}{r} 4 \leftarrow \text{factor} \\ \times 2 \leftarrow \text{factor} \\ \hline 8 \leftarrow \text{product} \end{array}$$

We say, “Four times two equals eight.”

Each group has the same number, so we can multiply.

Division

$$\begin{array}{ccc} 42 & \div & 6 & = & 7 \\ \uparrow & & \uparrow & & \uparrow \\ \text{dividend} & & \text{divisor} & & \text{quotient} \end{array}$$

$$\begin{array}{r} 7 \leftarrow \text{quotient} \\ \text{divisor} \rightarrow 6 \overline{) 42} \leftarrow \text{dividend} \end{array}$$

We say, “Forty-two divided by six equals seven.”

$$42 \div 6 = \square$$

Think $\square \times 6 = 42$

The missing factor is 7

$$7 \times 6 = 42$$

Tính Nhân

$$\begin{array}{ccc} 4 & \times & 2 & = & 8 \\ \uparrow & & \uparrow & & \uparrow \\ \text{thừa số} & & \text{thừa số} & & \text{tích số} \end{array}$$

$$\begin{array}{r} 4 \leftarrow \text{thừa số} \\ \times 2 \leftarrow \text{thừa số} \\ \hline 8 \leftarrow \text{tích số} \end{array}$$

Chúng ta nói, “Bốn nhân hai bằng tám.”

Mỗi nhóm có cùng số, vì vậy chúng ta có thể nhân lên.

Tính Chia

$$\begin{array}{ccc} 42 & \div & 6 & = & 7 \\ \uparrow & & \uparrow & & \uparrow \\ \text{số bị chia} & & \text{số chia} & & \text{thương số} \end{array}$$

$$\begin{array}{r} 7 \leftarrow \text{thương số} \\ \text{số chia} \rightarrow 6 \overline{) 42} \leftarrow \text{số bị chia} \end{array}$$

Chúng ta nói, “Bốn mươi hai chia cho sáu bằng bảy.”

$$42 \div 6 = \square$$

Nghĩ đến $\square \times 6 = 42$

Thừa số bị thiếu là 7

$$7 \times 6 = 42$$

Polygons

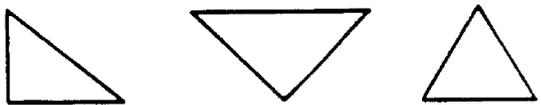
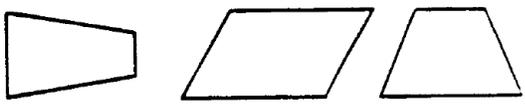
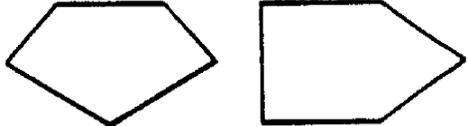
Hình Nhiều Cạnh (Đa Giác)

A **polygon** is a closed plane figure made up of line segments. The line segments form the sides of the polygon. Two sides meet at a point called the **vertex**.

*Hình nhiều cạnh hoặc đa giác là một hình kín phẳng được tạo nên bằng những đoạn thẳng. Những đoạn thẳng tạo thành các cạnh của đa giác. Hai cạnh cắt nhau ở một giao điểm gọi là **đỉnh** (góc).*

Polygons are named by the number of sides or angles they have. The number of sides is equal to the number of angles.

Đa giác được đặt tên tùy theo tổng số cạnh hoặc góc mà chúng có. Tổng số cạnh luôn bằng với tổng số góc.

Name of Polygon <i>Tên Của Đa Giác</i>	Number of Sides <i>Số Cạnh</i>	Number of Angles <i>Số Góc</i>	Examples <i>Hình Mẫu</i>
Triangle <i>Tam giác</i>	3	3	
Quadrilateral <i>Tứ giác</i>	4	4	
Pentagon <i>Ngũ giác</i>	5	5	
Hexagon <i>Lục giác</i>	6	6	
Octagon <i>Bát giác</i>	8	8	

TRIANGLES

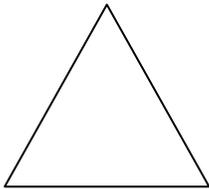
TAM GIÁC

The roof of this building is called a geodesic dome. It is made of many triangles.

Triangles are named according to their sides and angles.

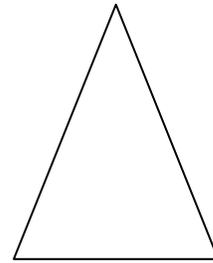
Mái của tòa nhà này là một mái vòm được gọi là geodesic dome. Nó được làm bằng nhiều hình tam giác nối sát cạnh nhau.

Hình tam giác được đặt tên theo số cạnh và góc mà chúng có.



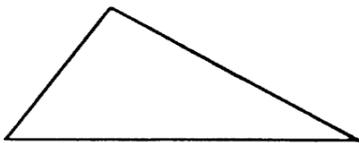
-An **equilateral** triangle has all congruent sides.

-Tam giác **đều** có ba cạnh có độ dài bằng nhau.



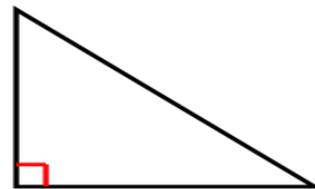
-An **isosceles** triangle has two congruent sides.

-Tam giác **cân** có hai cạnh có độ dài bằng nhau.



-A **scalene** triangle has no congruent sides.

-Tam giác **lệch** có ba cạnh có độ dài khác biệt nhau.



-A **right** triangle has one right angle.

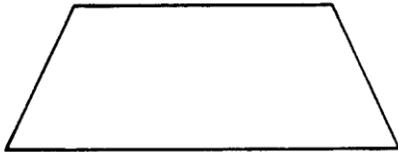
-Tam giác **vuông** có một góc vuông.

QUADRILATERALS

TỨ GIÁC

Quadrilaterals are polygons with four sides and four angles.

Tứ giác là hình đa giác có bốn cạnh và bốn góc.



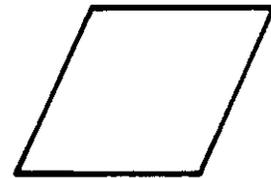
-A **trapezoid** is a quadrilateral with exactly one pair of opposite sides parallel.

-Hình thang là hình tứ giác với chỉ một cặp cạnh đối diện song song.



-A **parallelogram** is a quadrilateral with opposite sides parallel and congruent.

-Hình bình hành là một tứ giác với hai cạnh đối diện song song và bằng nhau.



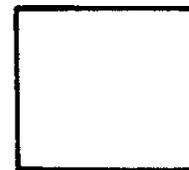
-A **rhombus** is a parallelogram with all sides congruent.

-Hình thoi là một hình bình hành với tất cả cạnh bằng nhau.



-A **rectangle** is a parallelogram with four right angles

-Hình chữ nhật là một hình bình hành với bốn góc vuông.

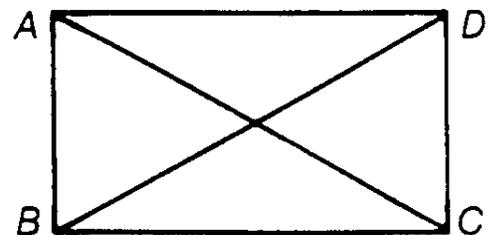


-A **square** is a rectangle with all sides congruent

- Hình vuông là một hình chữ nhật với bốn cạnh bằng nhau

-A **diagonal** is a segment that joins two vertices of a polygon but is not a side. \overline{AC} and \overline{BD} are diagonals.

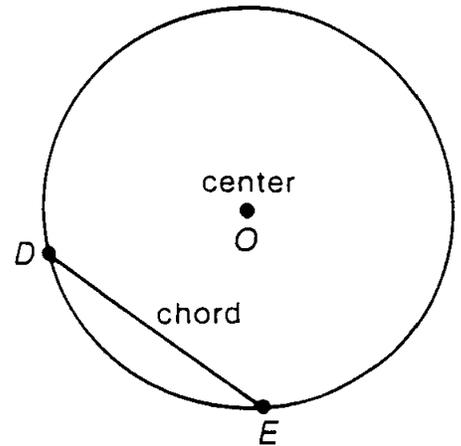
- Đường chéo là một đoạn thẳng kết nối hai đỉnh góc của một đa giác nhưng không phải là cạnh của đa giác đó. \overline{AC} và \overline{BD} là hai đường chéo.



CIRCLES

All of the points on a **circle** are the same distance from a point called the **center**. A circle is named by its center. This is circle O .

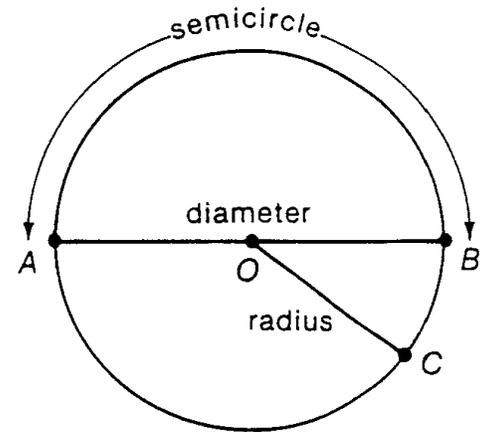
A **chord** is a line segment with both endpoints on the circle. \overline{DE} is a chord.



A **diameter** is a line segment that passes through the center of the circle and has both endpoints on the circle. \overline{AB} is a diameter.

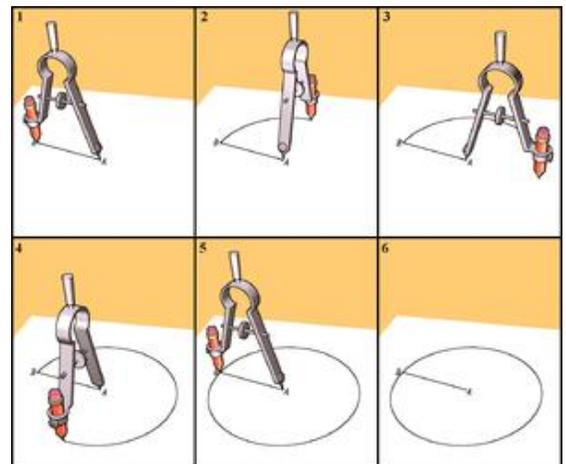
A **radius** is a line segment with one endpoint on the circle and the other endpoint at the center. The length of a radius is one half the length of a diameter. \overline{OC} is a radius.

A **semicircle** is a half circle. \widehat{AB} is a semicircle.



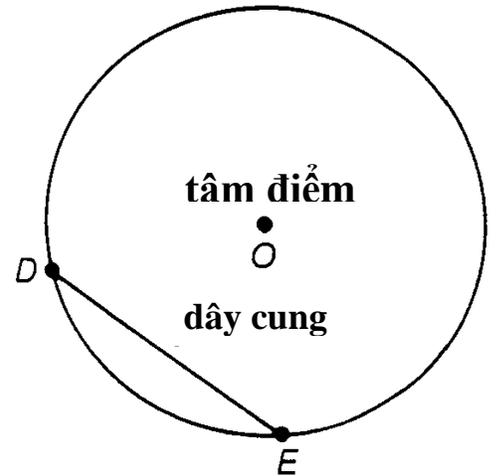
Use a compass to construct a circle.

- Step 1** Put the metal tip at a point to be the center.
- Step 2** Open the compass to the length of the radius.
- Step 3** Rotate the pencil around the center.



HÌNH TRÒN

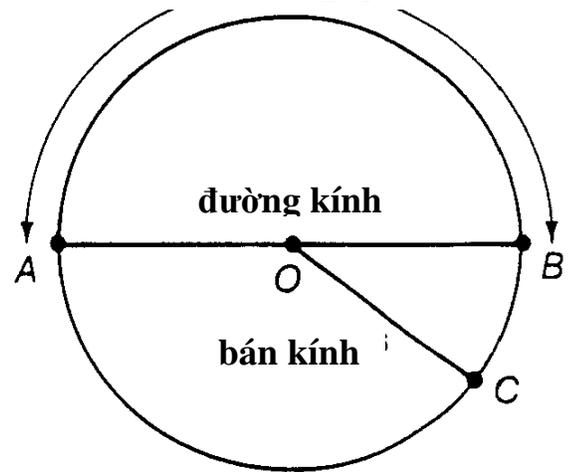
Tất cả các điểm trên **đường tròn** có cùng một khoảng cách từ **tâm điểm**. Hình tròn được gọi bằng tên của tâm điểm của nó. Đây là hình tròn O .



Dây cung là một đoạn thẳng có hai điểm cuối trên đường tròn. \overline{DE} là dây cung của hình tròn O .

Đường kính là một đoạn thẳng đi qua tâm điểm của vòng tròn và có cả hai điểm cuối trên đường tròn. \overline{AB} là một đường kính.

Hình bán nguyệt



Bán kính là một đoạn thẳng bắt đầu từ một điểm cuối trên đường tròn và kết thúc với một điểm cuối ngay tâm điểm. Chiều dài của bán kính bằng một nửa chiều dài của đường kính. \overline{OC} là một bán kính.

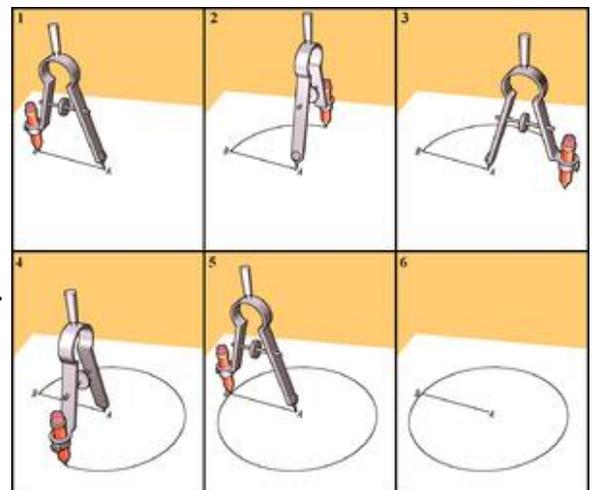
Hình **bán nguyệt** là một nửa vòng tròn. \widehat{AB} là một hình bán nguyệt.

Sử dụng com-pa để vẽ một vòng tròn.

Bước 1 Đặt đầu nhọn của com-pa tại một điểm. Điểm này sẽ là tâm điểm của hình tròn.

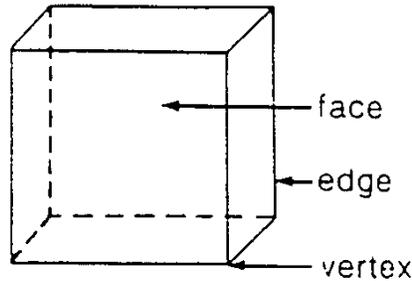
Bước 2 Mở com-pa đến bằng chiều dài của bán kính.

Bước 3 Giữ đầu nhọn của com-pa tại tâm điểm và xoay bút chì xung quanh.

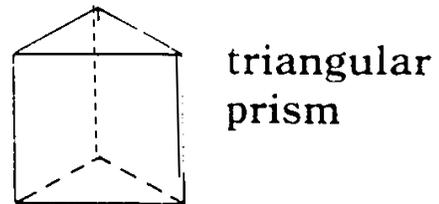
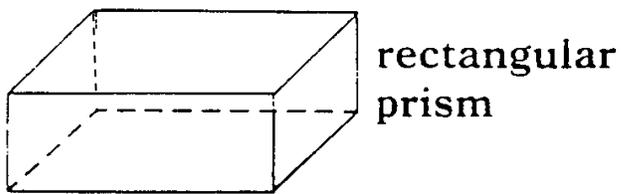


SPACE FIGURES

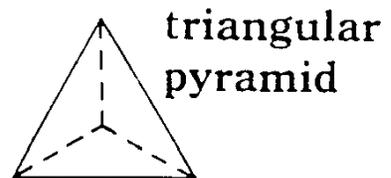
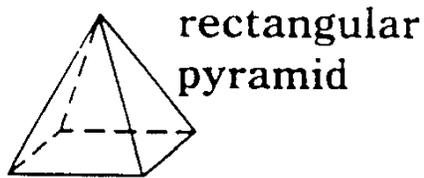
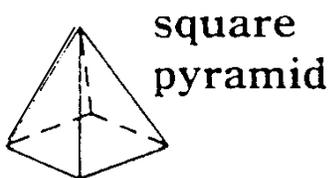
The **cube** is a **prism** with 6 flat surfaces called **faces**. Each face has the shape of a square. There are 12 **edges** where the faces meet. There are 8 vertices where the edges meet.



A prism has two parallel and congruent faces. It is named by the shape of its base.

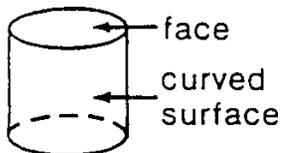


The figures below are **pyramids**. The faces are triangles with a common vertex. Each base is a polygon.

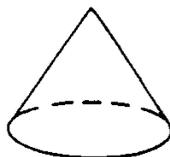


A **cylinder** has two parallel faces that are congruent circles. A **cone** has one circular flat face and one vertex.

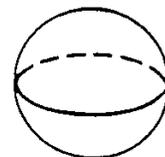
cylinder



cone

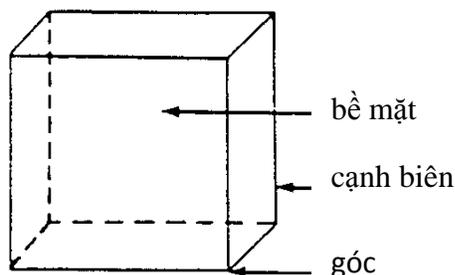


sphere

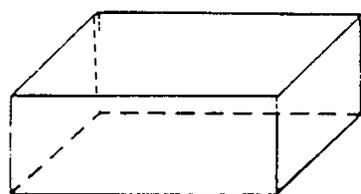


HÌNH KHỐI

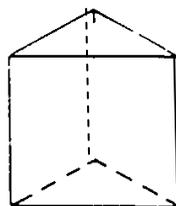
Hình **lập phương** là một hình **lăng trụ** với 6 **bề mặt** phẳng. Các bề mặt đều có hình dạng của hình vuông. Chúng cắt nhau ở 12 **cạnh biên**. Các cạnh biên cắt nhau và tạo thành 8 góc đỉnh.



Hình lăng trụ có hai bề mặt song song và tương đẳng. Tên của lăng trụ được tùy thuộc vào hình đáy của nó.

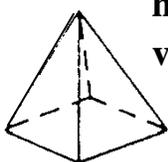


**hình lăng trụ
chữ nhật**

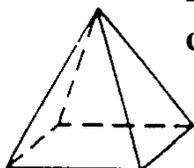


**hình lăng trụ
tam giác**

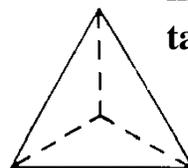
Những hình dưới đây là **hình chóp**. Bề mặt của chúng có dạng hình tam giác với một đỉnh chung. Mỗi hình đáy của chúng là một đa giác.



**hình chóp
vuông**



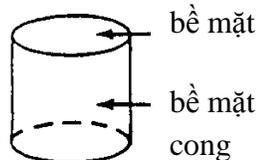
**hình chóp
chữ nhật**



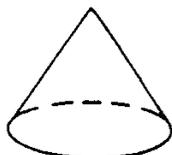
**hình chóp
tam giác**

Hình trụ tròn có hai bề mặt tròn song song và tương đẳng. **Hình nón** có một bề mặt phẳng hình tròn và một góc đỉnh.

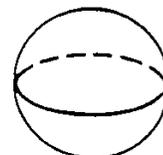
**hình trụ
tròn**



hình nón



hình cầu



CONGRUENT & SIMILAR FIGURES

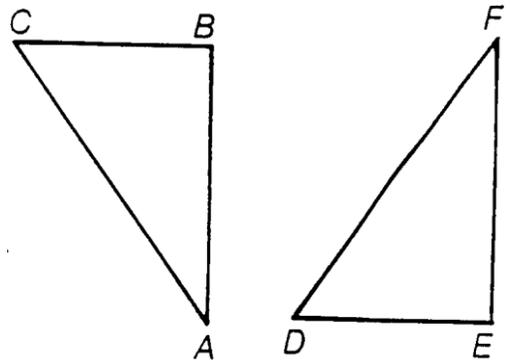
Congruent figures have the same size and shape.

Similar figures have the same shape. They may or may not have the same size.

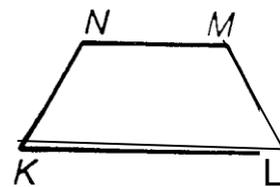
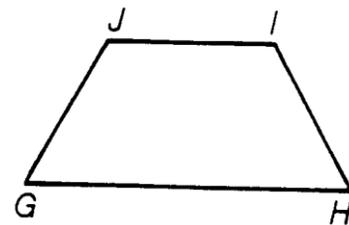
More Examples

Trace triangle ABC . Flip it over. Turn it or slide it until it fits over triangle DEF .

Triangle ABC is congruent to triangle DEF .



Quadrilateral $GHIJ$ is similar to quadrilateral $KLMN$.



HÌNH TƯƠNG ĐẲNG & HÌNH ĐỒNG DẠNG

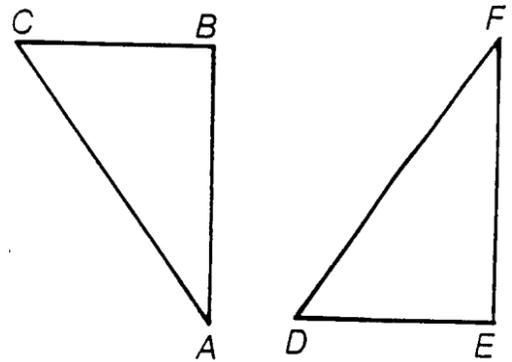
Những **hình tương đẳng** có cùng hình dáng và kích cỡ.

Những **hình đồng dạng** có cùng hình dáng. Chúng có thể có cùng, hoặc khác kích cỡ.

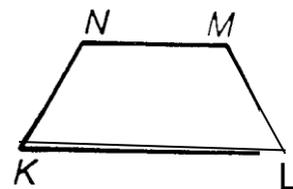
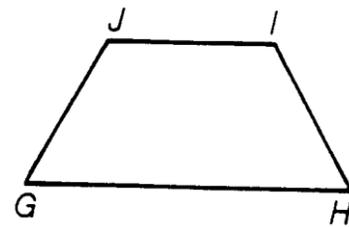
Thí Dụ

Đồ lại hình tam giác ABC . Lật nó lại. Xoay đổi hướng hoặc đẩy trượt nó cho đến khi nó nằm vừa trên hình tam giác DEF .

Hình tam giác ABC tương đẳng với tam giác DEF .



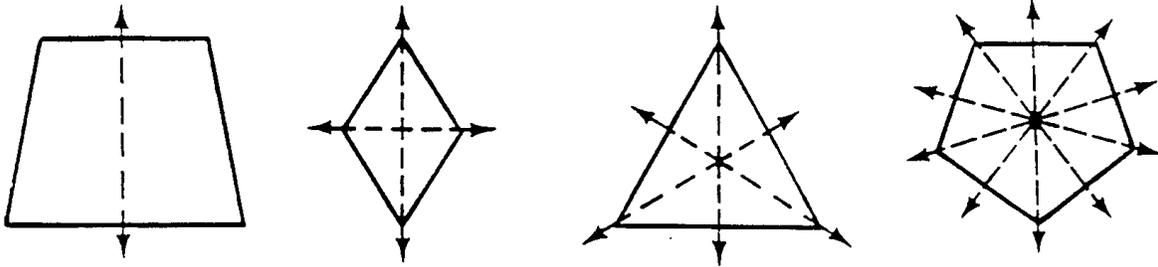
Tứ giác $GHIJ$ đồng dạng với tứ giác $KLMN$.



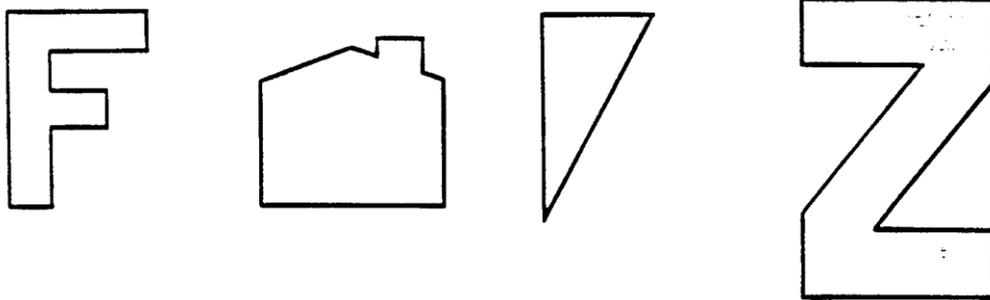
LINE OF SYMMETRY

A **line of symmetry** divides a figure into two congruent parts. One side of the White House is the mirror image of the other side.

Some figures have one or more lines of symmetry.



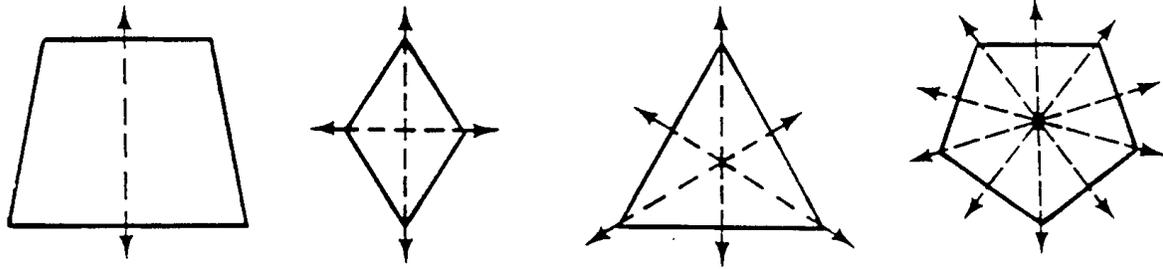
Some figures do not have any lines of symmetry.



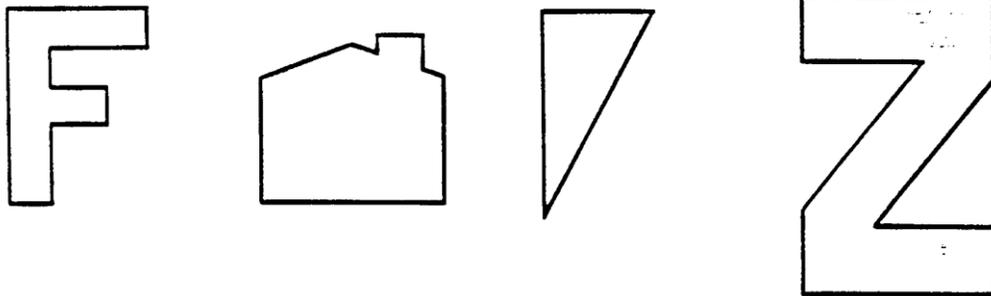
TRỤC ĐỐI XỨNG

Trục đối xứng chia một hình thành hai phần tương đẳng với nhau. Một bên của Tòa Bạch Ốc là hình ảnh phản chiếu của phía bên kia.

Vài hình có một hoặc nhiều trục đối xứng.



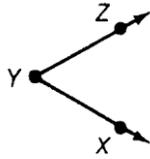
Vài hình không có bất kỳ trục đối xứng nào cả.



ANGLES

An **angle** is formed by two rays with a common endpoint called the **vertex**.

This is angle XYZ . Point Y is the vertex.



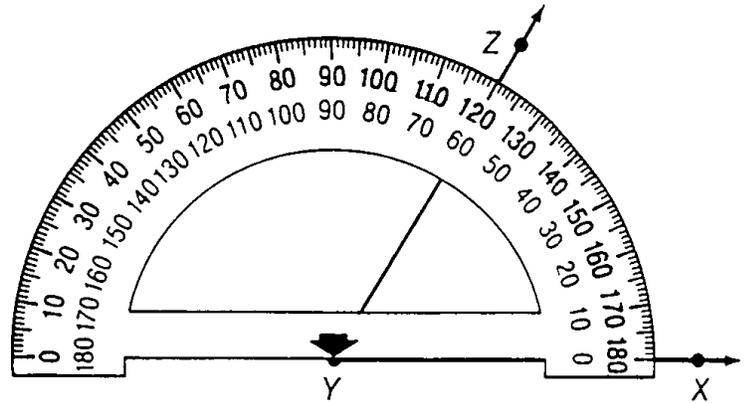
write
 $\angle XYZ$

A **protractor** is used to measure angles. The unit of measure is the **degree** ($^\circ$). The center of the protractor is placed on the vertex of the angle.

→
 YX is at 0° .

Read the inner scale.

The measure of $\angle XYZ = 60^\circ$.



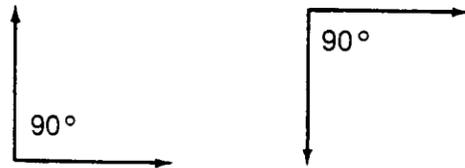
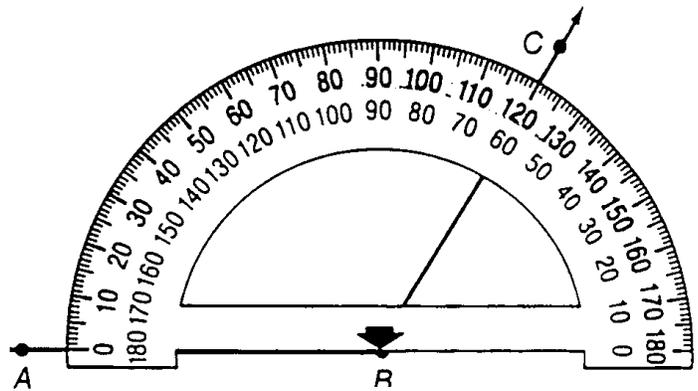
Measure angle ABC .

The vertex of the angle is at the center of the protractor.

→
 BA is at 0° .

Read the outer scale.

The measure of $\angle ABC = 120^\circ$.



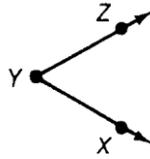
Angles are named according to their measures.

- A **right angle** measures 90° .
- An **acute angle** measures less than 90° .
- An **obtuse angle** measures greater than 90° but less than 180° .
- Two angles with the same measure are said to be **congruent**.

GÓC

Một **góc** được tạo thành bởi hai nửa đường thẳng cắt nhau ở một điểm đầu nút được gọi là **đỉnh**.

Đây là góc XYZ . Điểm Y là đỉnh.



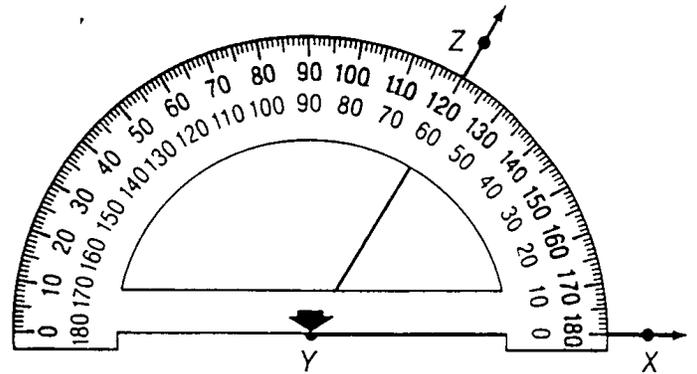
viết
 $\angle XYZ$

Thước đo góc (protractor) được sử dụng để đo các góc. Đơn vị đo lường của góc là số độ ($^\circ$). Canh và đặt trung tâm của thước đo tại đỉnh của góc.

\vec{YX} có 0° .

Đọc những số đo bên phía trong của thước đo góc.

Số đo của $\angle XYZ = 60^\circ$



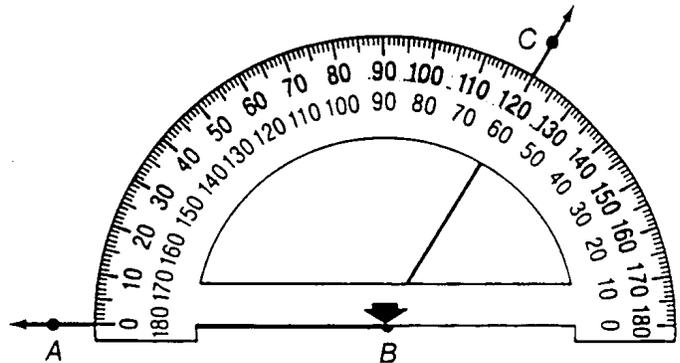
Đo góc ABC .

Đặt trung tâm của thước đo tại đỉnh của góc.

\vec{BA} có 0° .

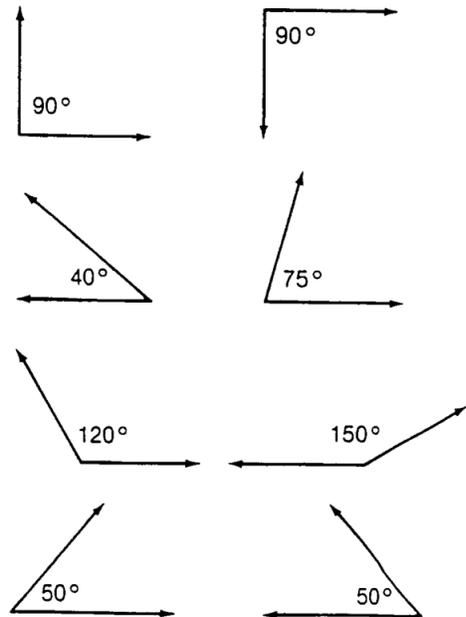
Đọc những số đo bên phía ngoài của thước đo góc.

Số đo của $\angle ABC = 120^\circ$



Tên của các góc được đặt dựa theo số độ đo lường của chúng.

- **Góc vuông** là góc bằng 90° .
- **Góc nhọn** là góc nhỏ hơn 90° .
- **Góc tù** là góc lớn hơn 90° nhưng nhỏ hơn 180° .
- Hai góc có cùng một số độ là hai góc **tương đẳng**.



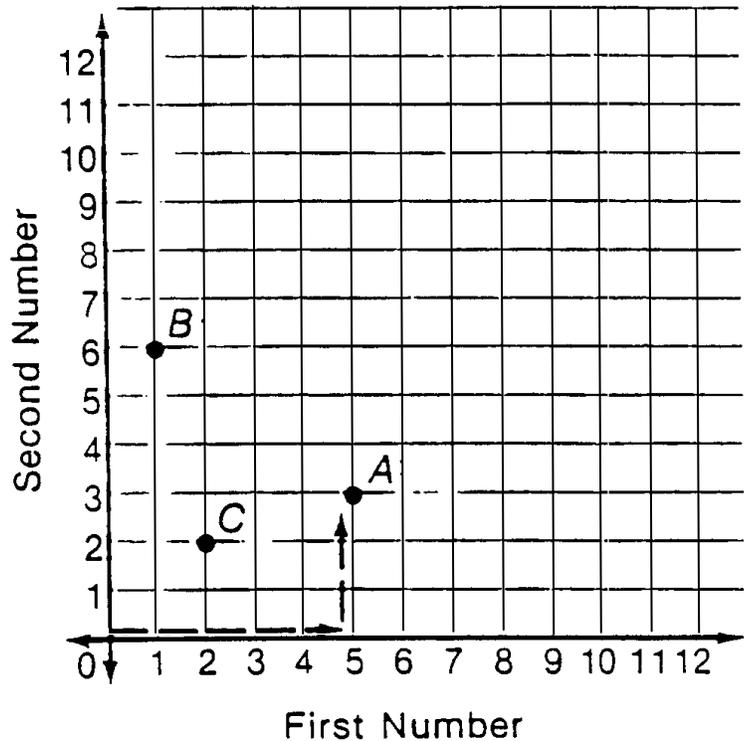
ORDERED PAIR

An ordered pair of numbers can be used to locate point A.

Follow these steps.

1. Start at 0.
2. Move 5 spaces to the right.
3. Move 3 spaces up.

Ordered pair (5,3) locates point A.



More Examples

- a. To locate point *B*:
 1. Move 1 space to the right.
 2. Move 6 spaces up.
 3. Ordered pair (1,6) locates point *B*.
- b. To locate point *C*:
 1. Move 2 spaces to the right.
 2. Move 2 spaces up.
 3. Ordered pair (2,2) locates point *C*.

An **ordered pair** of numbers is used to locate a point in a plane.

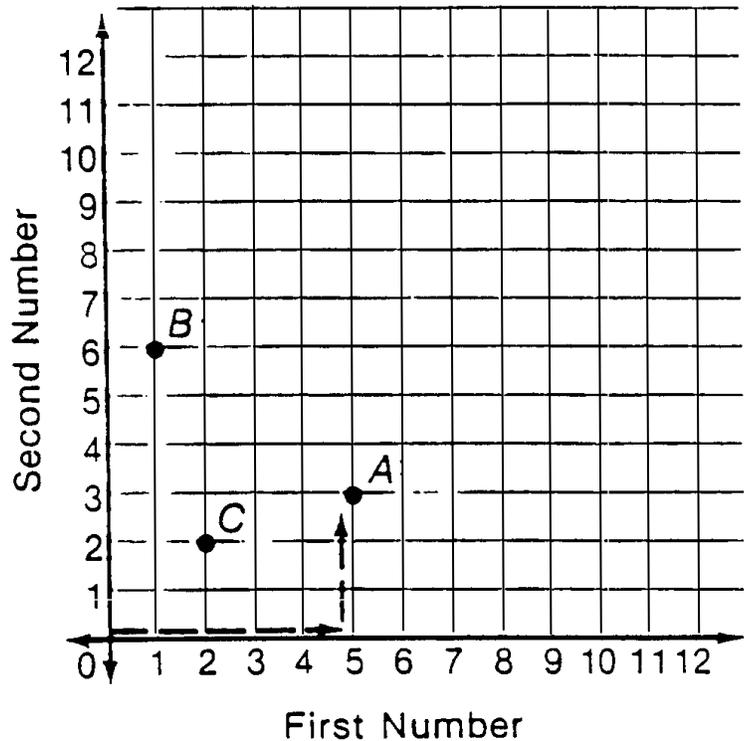
TỌA ĐỘ

Một cặp số thứ tự được gọi là tọa độ có thể được sử dụng để xác định vị trí của điểm A.

Theo các bước sau.

1. Bắt đầu từ điểm 0.
2. Di chuyển 5 ô qua bên phải.
3. Di chuyển 3 ô về phía trên.

Điểm A có tọa độ là (5,3)

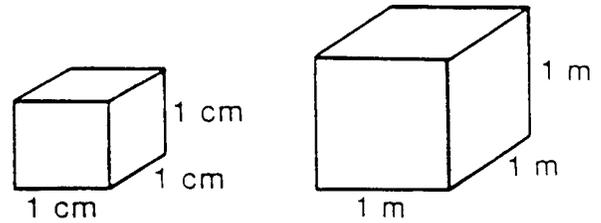


Thí Dụ

- a. Tìm vị trí của điểm B:
 1. Di chuyển 1 ô qua bên phải.
 2. Di chuyển 6 ô về phía trên.
 3. Điểm B có tọa độ là (1,6).
- b. Tìm vị trí của điểm C:
 1. Di chuyển 2 ô qua bên phải.
 2. Di chuyển 2 ô về phía trên.
 3. Điểm C có tọa độ là (2,2).

Tọa độ được sử dụng để xác định vị trí của một điểm trên mặt phẳng.

VOLUME

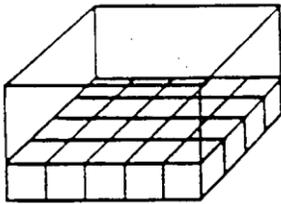


The **volume** of a space figure is the number of cubic units that fit inside the figure.

The **cubic centimeter** (cm^3) and **cubic meter** (m^3) are commonly used metric units of volume

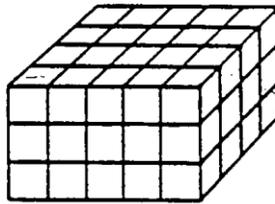
Find the volume of the box.

Step 1
Count the cubes in one layer.



$$5 \times 4 = 20 \text{ cubes}$$

Step 2
Count the layers.



3 layers

Step 3
Multiply to find the volume.

$$3 \times 20 = 60$$

The box holds 60 cubic centimeter blocks.

You can also multiply to find the volume.

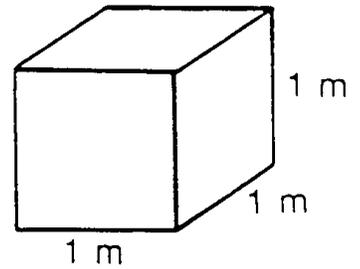
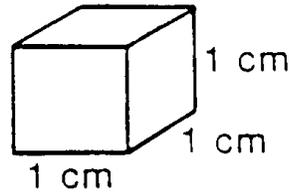
To find the volume, multiply the length, the width, and the height.

$$V = l \times w \times h$$

$$V = 5 \times 4 \times 3 = 60$$

The volume of the box is 60 cm^3 .

THỂ TÍCH



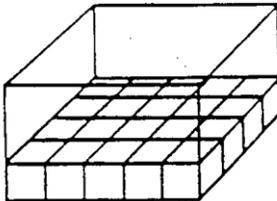
Để tìm **thể tích** của một hình trong không gian ba chiều, chúng ta cần đếm có bao nhiêu đơn vị khối được xếp vừa trong hình này.

Đơn vị **xentimét khối** (cm^3) và **mét khối** (m^3) là hai đơn vị đo lường thường được sử dụng cho thể tích.

Tìm thể tích của hộp.

Bước 1

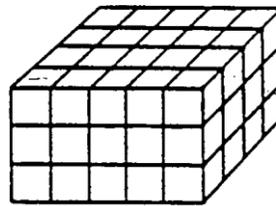
Đếm xem có bao nhiêu hình khối được xếp ở một tầng.



$$5 \times 4 = 20 \text{ khối}$$

Bước 2

Đếm xem có bao nhiêu tầng.



3 tầng

Bước 3

Nhân số hình khối và số tầng để tìm thể tích.

$$3 \times 20 = 60$$

Hộp chứa 60 xentimét khối

Bạn cũng có thể dùng toán nhân để tìm thể tích.

Để tìm thể tích (V), nhân chiều dài (l), chiều rộng/ngang (w), và chiều cao (h).

$$V = l \times w \times h$$

$$V = 5 \times 4 \times 3 = 60$$

Thể tích của hộp là 60 cm^3 .

NUMBER AND ORDINAL NUMBERS (SỐ ĐẾM VÀ SỐ THỨ TỰ)

NUMBERS (SỐ ĐẾM)	
1	one - <i>một</i>
2	two - <i>hai</i>
3	three - <i>ba</i>
4	four - <i>bốn</i>
5	five - <i>năm</i>
6	six - <i>sáu</i>
7	seven - <i>bảy</i>
8	eight - <i>tám</i>
9	nine - <i>chín</i>
10	ten - <i>mười</i>
11	eleven - <i>mười một</i>
12	twelve - <i>mười hai</i>
13	thirteen - <i>mười ba</i>
14	fourteen - <i>mười bốn</i>
15	fifteen - <i>mười lăm</i>
16	sixteen - <i>mười sáu</i>
17	seventeen - <i>mười bảy</i>
18	eighteen - <i>mười tám</i>
19	nineteen - <i>mười chín</i>
20	twenty - <i>hai mươi</i>
21	twenty-one - <i>hai mươi một</i>
22	twenty-two - <i>hai mươi hai</i>
23	twenty-three - <i>hai mươi ba</i>
24	twenty-four - <i>hai mươi bốn</i>
25	twenty-five - <i>hai mươi lăm</i>
26	twenty-six - <i>hai mươi sáu</i>
27	twenty-seven - <i>hai mươi bảy</i>
28	twenty-eight - <i>hai mươi tám</i>
29	twenty-nine - <i>hai mươi chín</i>
30	thirty - <i>ba mươi</i>
40	forty - <i>bốn mươi</i>
50	fifty - <i>năm mươi</i>
60	sixty - <i>sáu mươi</i>
70	seventy - <i>bảy mươi</i>
80	eighty - <i>tám mươi</i>
90	ninety - <i>chín mươi</i>
100	hundred - <i>một trăm</i>

ORDINAL NUMBERS (SỐ THỨ TỰ)	
1 st	first - <i>thứ nhất</i>
2 nd	second - <i>thứ hai</i>
3 rd	third - <i>thứ ba</i>
4 th	fourth - <i>thứ tư</i>
5 th	fifth - <i>thứ năm</i>
6 th	sixth - <i>thứ sáu</i>
7 th	seventh - <i>thứ bảy</i>
8 th	eighth - <i>thứ tám</i>
9 th	ninth - <i>thứ chín</i>
10 th	tenth - <i>thứ mười</i>
11 th	eleventh - <i>thứ mười một</i>
12 th	twelfth - <i>thứ mười hai</i>
13 th	thirteenth - <i>thứ mười ba</i>
14 th	fourteenth - <i>thứ mười bốn</i>
15 th	fifteenth - <i>thứ mười lăm</i>
16 th	sixteenth - <i>thứ mười sáu</i>
17 th	seventeenth - <i>thứ mười bảy</i>
18 th	eighteenth - <i>thứ mười tám</i>
19 th	nineteenth - <i>thứ mười chín</i>
20 th	twentieth - <i>thứ hai mươi</i>
21 st	twenty-first - <i>thứ hai mươi một</i>
22 nd	twenty-second - <i>thứ hai mươi hai</i>
23 rd	twenty-third - <i>thứ hai mươi ba</i>
24 th	twenty-fourth - <i>thứ hai mươi bốn</i>
25 th	twenty-fifth - <i>thứ hai mươi lăm</i>
26 th	twenty-sixth - <i>thứ hai mươi sáu</i>
27 th	twenty-seventh - <i>thứ hai mươi bảy</i>
28 th	twenty-eighth - <i>thứ hai mươi tám</i>
29 th	twenty-ninth - <i>thứ hai mươi chín</i>
30 th	thirtieth - <i>thứ ba mươi</i>
40 th	fortieth - <i>thứ bốn mươi</i>
50 th	fiftieth - <i>thứ năm mươi</i>
60 th	sixtieth - <i>thứ sáu mươi</i>
70 th	seventieth - <i>thứ bảy mươi</i>
80 th	eightieth - <i>thứ tám mươi</i>
90 th	ninetieth - <i>thứ chín mươi</i>
100 th	hundredth - <i>thứ một trăm</i>

MATHEMATICAL SYMBOLS (KÝ HIỆU TOÁN HỌC)

\$	dollars (đô/đồng)	\neq	is not equal to (không bằng nhau)
¢	cents (xu)	$<$	less than (nhỏ hơn)
%	percent (phần trăm)	$>$	greater than (lớn hơn)
π	pi (<i>pi</i>)	\geq	is greater than or equal to (lớn hơn hoặc bằng nhau)
$3.\overline{21}$	repeating decimal (số thập phân tái diễn)	\leq	is less than or equal to (nhỏ hơn hoặc bằng nhau)
45°	(forty-five) degrees (bốn mươi lăm) độ	\sim	is similar to (là hình đồng dạng với)
F	Fahrenheit (nhiệt độ Fa-ren-hét hay độ F)	\cong	is congruent to (là hình tương đẳng với)
C	centigrade (nhiệt độ bách phân hay độ C)	+4	positive integer (số nguyên dương)
•	point (điểm)	-4	negative integer (số nguyên âm)
$\sqrt{\quad}$	square root (số căn bình phương)	—	line segment (đoạn thẳng)
()	arc (hình cung)	\longleftrightarrow	line (đường thẳng)
\div	divide (chia)	\rightarrow	ray (nửa đường thẳng; tia)
\perp	divide (chia)	\sphericalangle	angle (góc)
+	add (cộng)	$m\angle$	measure of angle (số đo của góc)
-	subtract (trừ)	\triangle	triangle (hình tam giác)
\times	multiply (nhân)	\perp	perpendicular (hai đường trực giao)
•	multiply (nhân)	\parallel	parallel (hai đường song song)
=	is equal to (bằng nhau)	5^3	exponent (số mũ, lũy thừa)

WHICH MEASURES?

Length

Metric System

1 centimeter (cm) = 10 millimeters (mm)
1 decimeter (dm) = 10 centimeters (cm)
1 meter (m) = 10 decimeters (dm)
1 meter (m) = 100 centimeters (cm)
1 meter (m) = 1000 millimeters (mm)
1 decameter (dkm) = 10 meters (m)
1 hectometer (hm) = 100 meters (m)
1 kilometer (km) = 100 decameters (dkm)
1 kilometer (km) = 1000 meters (m)

U.S. System

1 foot (ft) = 12 inches (in)
1 yard (yd) = 36 inches (in)
1 yard (yd) = 3 feet (ft)
1 mile (mi) = 5280 feet (ft)
1 mile (mi) = 1760 yards (yd)

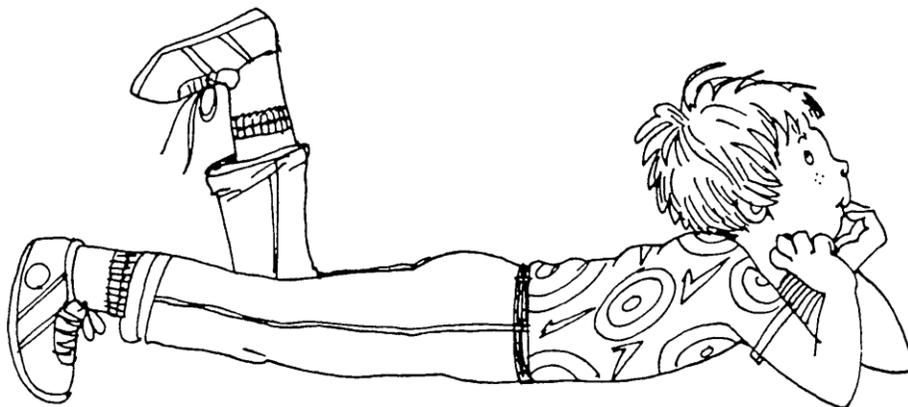
Capacity

Metric System

1 teaspoon = 5 milliliters (mL)
1 tablespoon = 12.5 milliliters (mL)
1 liter (L) = 1000 milliliters (mL)
1 liter (L) = 1000 cubic centimeters (cm³)
1 liter (L) = 1 cubic decimeter (dm³)
1 liter (L) = 4 metric cups
1 kiloliter (kL) = 1000 liters (L)

U.S. System

1 tablespoons (T) = 3 teaspoons (t)
1 cup (c) = 16 tablespoons (T)
1 cup (c) = 8 fluid ounces (fl oz)
1 pint (pt) = 2 cups (c)
1 pint (pt) = 16 fluid ounces (fl oz)
1 quart (qt) = 4 cups (c)
1 quart (qt) = 2 pints (pt)
1 quart (qt) = 32 fluid ounces (fl oz)
1 gallon (gal) = 16 cups (c)
1 gallon (gal) = 8 pints (pt)
1 gallon (gal) = 4 quarts (qt)
1 gallon (gal) = 128 fluid ounces (fl oz)



ĐƠN VỊ ĐO LƯỜNG

Chiều Dài

Hệ Đo Lường Quốc Tế

- 1 xentimét (cm) = 10 milimét (mm)
- 1 đêximét (dm) = 10 xentimét (cm)
- 1 mét (m) = 10 đêximét (dm)
- 1 mét (m) = 100 xentimét (cm)
- 1 đêcamét (dkm) = 10 mét (m)
- 1 hécômét (hm) = 100 mét (m)
- 1 kilômét (km) = 100 đêcamét (dkm)
- 1 kilômét (km) = 1000 mét (m)

Hệ Đo Lường Hoa Kỳ

- 1 bộ (ft) = 12 inches (in) tiếng Việt đọc như "in-sơ"
- 1 mã (yd) = 36 inches (in) tiếng Việt đọc như "in-sơ"
- 1 mã (yd) = 3 bộ (ft)
- 1 dặm (mi) = 5280 bộ (ft)
- 1 dặm (mi) = 1760 mã (yd)

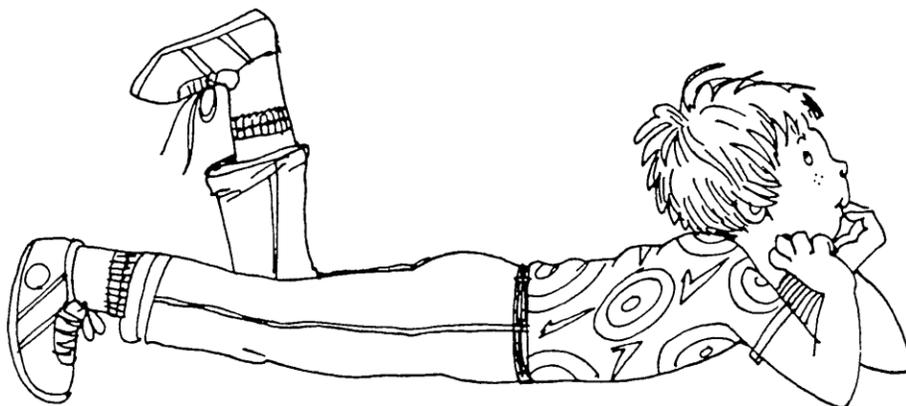
Dung Tích Thể Lỏng

Hệ Đo Lường Quốc Tế

- 1 thìa cà phê = 5 mililít (mL)
- 1 thìa xúp = 12.5 mililít (mL)
- 1 lít (L) = 1000 mililít (mL)
- 1 lít (L) = 1000 centimét khối (cm³)
- 1 lít (L) = 1 đêximét khối (dm³)
- 1 lít (L) = 4 metric cups
- 1 kilôlít (kL) = 1000 lít (L)

Hệ Đo Lường Hoa Kỳ

- 1 thìa xúp (T) = 3 thìa cà phê (t)
- 1 cup (c) = 16 thìa xúp (T)
- 1 cup (c) = 8 chất lỏng aoxơ (fl oz)
- 1 panh (pt) = 2 cups (c)
- 1 panh (pt) = 16 chất lỏng aoxơ (fl oz)
- 1 phần tư ga-lông (qt) = 4 cups (c)
- 1 phần tư ga-lông (qt) = 2 panh (pt)
- 1 phần tư ga-lông (qt) = 32 chất lỏng aoxơ (fl oz)
- 1 galông (gal) = 16 cups (c)
- 1 galông (gal) = 8 panh (pt)
- 1 galông (gal) = 4 phần tư ga-lông (qt)
- 1 galông (gal) = 128 chất lỏng aoxơ (fl oz)



WHICH MEASURES? Cont.

Weight

Metric System

- 1 gram (g) = 1000 milligrams (mg)
- 1 kilogram (kg) = 1000 grams (g)
- 1 metric ton (t) = 1000 kilograms (kg)

U.S. System

- 1 pound (lb) = 16 ounces (oz)
- 1 ton (T) = 2000 pounds (lb)

Time

- 1 minute (min) = 60 seconds (sec)
- 1 hour (hr) = 60 minutes (min)
- 1 day = 24 hours (hr)
- 1 week = 7 days
- 1 year (yr) = 52 weeks
- 1 year (yr) = 365¼ days
- 1 decade = 10 years
- 1 century = 100 years

ALL KINDS OF FORMULAS

Perimeter	
Perimeter of a triangle	$P = a + b + c$
Perimeter of a rectangle	$P = 2(h + w)$
Circumference of a circle	$C = 2\pi r$
Area	
Area of a circle	$A = \pi r^2$
Area of a square	$A = s^2$
Area of a triangle	$A = \frac{1}{2}bh$
Area of a trapezoid	$A = h \frac{(b_1 + b_2)}{2}$
Volume	
Volume of a rectangular or triangular prism	$V = Bh$ (B is area of base)
Volume of a pyramid	$V = \frac{1}{3} Bh$ (B is area of base)
Volume of a cube	$V = s^3$
Volume of a cylinder	$V = \pi r^2h$
Volume of a cone	$V = \frac{1}{3} \pi r^2h$
Volume of a sphere	$V = \frac{4}{3} \pi r^3$

ĐƠN VỊ ĐO LƯỜNG (tiếp theo)

Trọng Lượng

Hệ Đo Lường Quốc Tế

- 1 gam (g) = 1000 miligam (mg)
- 1 kilôgam (kg) = 1000 gam (g)
- 1 tấn mét (t) = 1000 kilôgam (kg)

Hệ Đo Lường Hoa Kỳ

- 1 pao (lb) = 16 aoxơ (oz)
- 1 ton (T) = 2000 pao (lb)

Thời Gian

- 1 phút (min) = 60 giây (sec)
- 1 tiếng (hr) = 60 phút (min)
- 1 ngày = 24 tiếng (hr)
- 1 tuần = 7 ngày
- 1 năm (yr) = 52 tuần
- 1 năm (yr) = 365¼ ngày
- 1 thập kỷ = 10 năm
- 1 thế kỷ = 100 năm

NHỮNG CÔNG THỨC TOÁN

Chu Vi	
Chu vi của hình tam giác	$P = a + b + c$ (a, b và c là các cạnh của tam giác)
	$P = 2(h + w)$ (h là chiều cao, và w là bề ngang của chữ nhật)
Chu vi của hình tròn	$C = 2\pi r$ (r là đường bán kính, và π bằng 3.14)
Diện Tích	
Diện tích của hình tròn	$A = \pi r^2$ (r là đường bán kính, và π bằng 3.14)
Diện tích của hình vuông	$A = s^2$ (s là cạnh của hình vuông)
Diện tích của hình tam giác	$A = \frac{1}{2}bh$ (h là chiều cao, và b là đường đáy của chữ nhật)
Diện tích của hình thang	$A = h \frac{(b_1 + b_2)}{2}$ (h là chiều cao, và b là đường đáy của hình thang)
Thể Tích	
Thể tích của hình lăng trụ chữ nhật hoặc hình lăng trụ tam giác	$V = Bh$ (h là chiều cao, và B là diện tích của mặt đáy)
Thể tích của hình chóp	$V = \frac{1}{3} Bh$ (h là chiều cao, và B là diện tích của mặt đáy)
Thể tích của hình lập phương	$V = s^3$ (s là cạnh của hình vuông)
Thể tích của hình trụ tròn	$V = \pi r^2 h$ (r là đường bán kính, h là chiều cao, và π bằng 3.14)
Thể tích của hình nón	$V = \frac{1}{3} \pi r^2 h$ (r là đường bán kính, h là chiều cao, và π bằng 3.14)
Thể tích của hình cầu	$V = \frac{4}{3} \pi r^3$ (r là đường bán kính, và π bằng 3.14)

PROBLEM SOLVING PROCESS

POLYA'S FOUR STEP PROBLEM SOLVING PROCESS

Step 1: Understand the problem

- a. Do you understand all the words?
- b. Can you restate the problem in your own words?
- c. Do you know what is given?
- d. Do you know what the goal is?
- e. Is there enough information?
- f. Is there extraneous information?
- g. Is this problem similar to another problem you've solved?

Step 2: Devise a plan. Can one of the following strategies be used?

- a. Guess and check
- b. Use a variable
- c. Look for a pattern
- d. Make a list
- e. Solve a simpler problem
- f. Draw a picture
- g. Draw a diagram
- h. Use deduction
- i. Work backwards
- j. Write a computer program
- k. Use number theory
- l. Solve an equivalent problem
- m. Use indirect reasoning
- n. Use cases
- o. Solve an equation

Step 3: Carry out the plan

- a. Implement the strategy you've chosen until the problem is solved or until a new course of action is suggested.
- b. Give yourself a reasonable period of time to solve the problem. If you are not successful, seek hints from others or put the problem aside for a while. (You may have a flash of insight when you least expect it!)
- c. Don't be afraid of starting all over. Many times a fresh start and a new strategy leads to success.

Step 4: Look back

- a. Is your solution correct? Does your answer satisfy the statement of the problem?
- b. Can you see an easier solution?
- c. Can you see how you can extend your solution to a more general case?

QUY TRÌNH GIẢI TOÁN ĐỒ

BỐN BƯỚC TRONG QUY TRÌNH GIẢI TOÁN ĐỒ CỦA POLYA

Bước 1: Hiểu bài toán đồ

- Bạn có hiểu tất cả các từ được sử dụng?
- Bạn có thể nói lại đề bài bằng cách khác?
- Đề bài cho bạn biết những chi tiết gì?
- Bạn có hiểu mục đích của bài toán đồ đang cần bạn giải vấn đề gì?
- Đề bài có cho đủ chi tiết cần thiết không?
- Đề bài có cho lẫn những chi tiết không liên quan không?
- Bài toán đồ này có tương tự như một bài toán đồ khác bạn đã giải không?

Bước 2: Đặt ra một kế hoạch. Xem một trong những chiến lược sau đây có thể sử dụng được không?

- Đoán và kiểm tra
- Sử dụng một biến số
- Tìm kiếm một khuôn thức/dãy số
- Tạo một danh sách
- Giải một bài toán đồ đơn giản hơn
- Vẽ hình để giúp hiểu thêm về chi tiết
- Vẽ một sơ đồ
- Sử dụng sự suy luận
- Giải bài bằng cách giải ngược
- Viết một lập trình trong máy tính
- Sử dụng lý thuyết số
- Giải một bài tương đương
- Sử dụng lý luận gián tiếp
- Xem xét trường hợp đặc biệt
- Viết và giải một phương trình

Bước 3: Thực hiện kế hoạch đã đặt ra

- Thực hiện chiến lược mà bạn đã chọn cho đến khi bài được giải hoặc cho đến khi một tiến trình khác được thấy là cần thiết.
- Hãy cho mình một khoảng thời gian hợp lý để giải bài toán. Nếu bạn không thành công, tìm kiếm sự gợi ý từ người khác hoặc đặt bài sang một bên. (Bạn có thể có một cái nhìn sâu sắc hơn khi bạn có một thời gian không để ý đến nó!)
- Đừng sợ bắt đầu lại tất cả. Nhiều khi một khởi đầu mới và một chiến lược mới dẫn đến thành công

Bước 4: Xem Xét Lại

- Đáp số của bạn có đúng không? Câu trả lời của bạn có hợp lý với những yếu tố được trình bày trong đề bài không?
- Bạn có thể thấy được một giải pháp dễ dàng hơn không?
- Bạn có thấy làm như thế nào để có thể khái quát hóa giải pháp của bạn đến một trường hợp tổng quát hơn?

Name _____

Date _____

NUMBERS	+, -, ×, ÷	WRITE / WORK	ANSWER

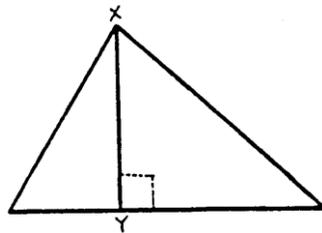
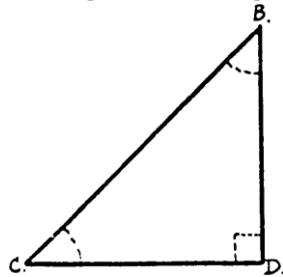
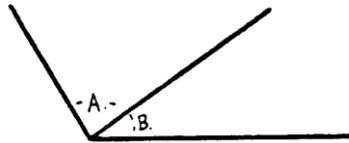
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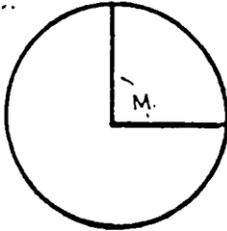
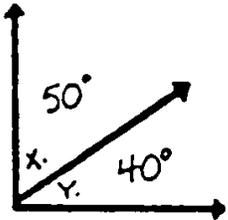
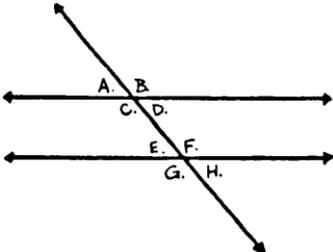
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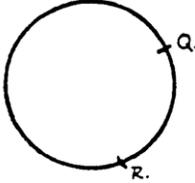
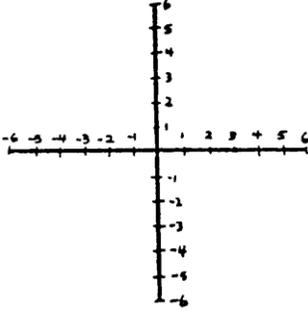
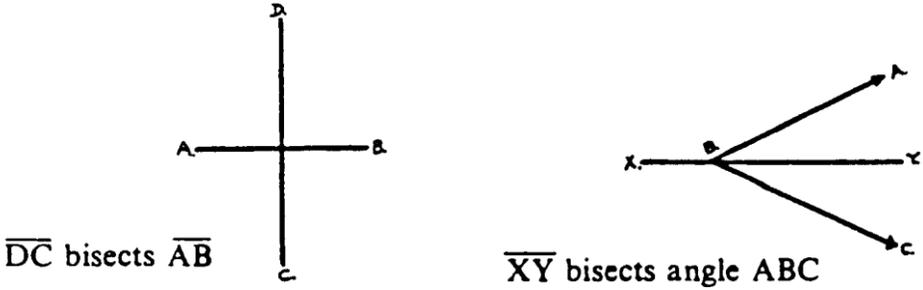
SỐ	+ , - , x , ÷	SẮP ĐẶT CÔNG TRÌNH GIẢI	ĐÁP SỐ

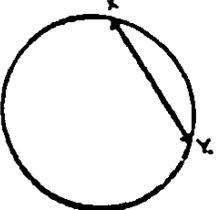
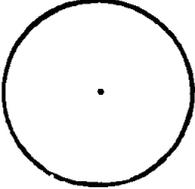
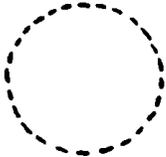
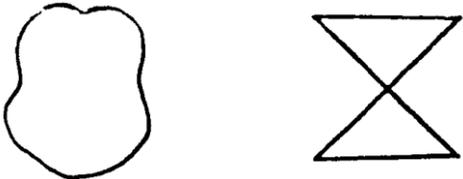
MATH TERMS FOR EVERY OCCASION

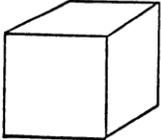
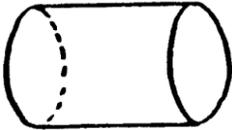
Math Terms	Definitions
Addend	<ul style="list-style-type: none"> - A number being added in an addition problem <ul style="list-style-type: none"> ▪ In the equation $4 + 7 = 11$, 4 and 7 are addends
Addition	<ul style="list-style-type: none"> - An operation combining two or more numbers
Additive Inverse	<ul style="list-style-type: none"> - For a given number, the number that can be added to give a sum of 0 <ul style="list-style-type: none"> ▪ -4 is the additive inverse of +4 because $-4 + (+4) = 0$
Adjacent Angle	<ul style="list-style-type: none"> - Angles that have the same vertex and a common side between them <ul style="list-style-type: none"> ▪ Angle A is adjacent to angle B.
Adjacent Side	<ul style="list-style-type: none"> - The leg next to the given angle in a right triangle <ul style="list-style-type: none"> ▪ Side \overline{CD} is adjacent to angle C.
Altitude of a Triangle	<ul style="list-style-type: none"> - The distance between a point on the base and the vertex of the opposite angle, measured along a line which is perpendicular to the base (the altitude is also referred to as the height of the triangle) <ul style="list-style-type: none"> ▪ Segment \overline{XY} is the altitude in this triangle.

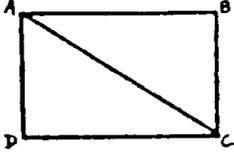
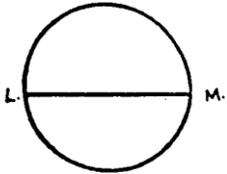


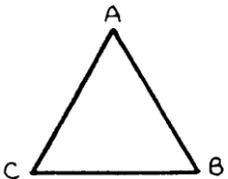
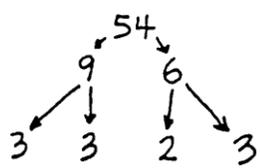
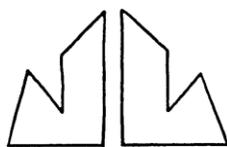
Angle	<p>- A figure formed by two rays having a common endpoint (vertex)</p>
<p>Acute Angle Right Angle Obtuse Angle Straight Angle</p>	<ul style="list-style-type: none"> ▪ An <i>acute angle</i> measures less than 90° (see #1). ▪ A <i>right angle</i> measures 90° (see #2). ▪ An <i>obtuse angle</i> measures more than 90° and less than 180° (see #3). ▪ A <i>straight angle</i> measures 180° (see #4). 
Central Angle	<p>- an angle formed by two radii of a circle.</p>  <ul style="list-style-type: none"> ▪ Angle M is a central angle.
Complementary Angles	<p>- two angles whose combined measures equal 90°</p>  <ul style="list-style-type: none"> ▪ X and Y are complementary angles.
<p>Congruent angles Corresponding angles Supplementary angles Vertical Angles</p>	<ol style="list-style-type: none"> 1. Congruent angles – angles having the same measure 2. Corresponding angles – angles which are formed when a line intersects two parallel lines; corresponding angles are congruent 3. Supplementary angles – two angles whose combined measured equal 180° 4. Vertical angles – angles which are formed opposite one another when two lines intersect; vertical angles are congruent  <ul style="list-style-type: none"> ▪ B and F are corresponding angles ▪ A and B are supplementary angles ▪ E and H are vertical angles

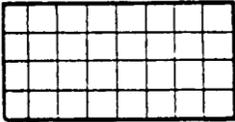
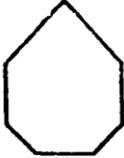
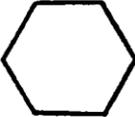
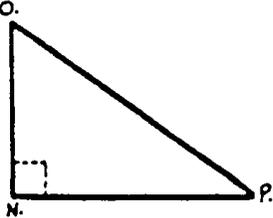
Arc	<ul style="list-style-type: none"> - A part of a circle between any two points on the circle  <ul style="list-style-type: none"> ▪ Segment \widehat{QR} is an arc.
Area	<ul style="list-style-type: none"> - The measure of the region inside a closed plane figure; area is measured in square units
Associative Property For Addition and Multiplication	<ul style="list-style-type: none"> - The rule stating that the grouping of addends or factors does not affect the sum or product - $(3 + 6) + 9 = 3 + (6 + 9)$; $(2 \times 4) \times 7 = 2 \times (4 \times 7)$
Average	<ul style="list-style-type: none"> - The sum of a set of numbers divided by the number of addends ▪ The average of 1, 2, 7, 3, 8, and 9 = $\frac{1 + 2 + 7 + 3 + 8 + 9}{6} = 5$
Axes	<ul style="list-style-type: none"> - Two perpendicular number lines with a common origin 
Axis	<ul style="list-style-type: none"> - A number line which may be vertical or horizontal
Base	<ul style="list-style-type: none"> - 1. A side of a geometric figure - 2. A standard grouping of a numeration system ▪ If a numeration system groups objects by fives, it is called a base 5 system (23 is a base 5 numeral meaning two fives and three ones).
Bisect	<ul style="list-style-type: none"> - To divide into two congruent parts  <p>\overline{DC} bisects \overline{AB}</p> <p>\overline{XY} bisects angle ABC</p>
Bisector	<ul style="list-style-type: none"> - A line or ray that divides a segment or angle into two congruent parts
Capacity	<ul style="list-style-type: none"> - The measure of the amount that a container will hold
Chance	<ul style="list-style-type: none"> - The probability or likelihood of an occurrence

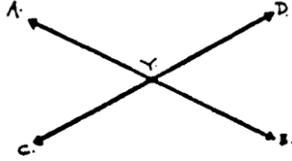
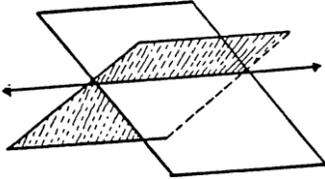
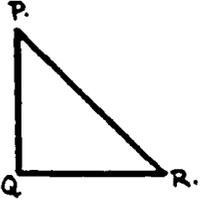
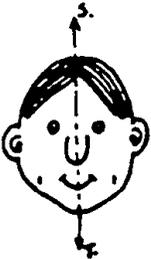
Chord	<ul style="list-style-type: none"> - A line segment having endpoints on a circle  <ul style="list-style-type: none"> ▪ \overline{XY} is a chord.
Circle	<ul style="list-style-type: none"> - A closed curve in which all points on the edge are equidistant from a given point in the same plane 
Circumference	<ul style="list-style-type: none"> - The distance around the circle <p style="text-align: center;">circumference = π x diameter</p> 
Closed figure	<ul style="list-style-type: none"> - A set of points that encloses a region in the same plane; a curve that begins and ends at the same point 
Coefficient	<ul style="list-style-type: none"> - In the expression $8x$, 8 is the coefficient of x
Coincide	<ul style="list-style-type: none"> - Two lines coincide when they intersect at more than one point
Collinear	<ul style="list-style-type: none"> - When points are on the same line, they are collinear
Common Denominator	<ul style="list-style-type: none"> - A whole number that is the denominator for both members of a pair of fractions <p style="text-align: center;">For $\frac{3}{7}$ and $\frac{5}{7}$, 7 is a common denominator.</p>
Common Factor	<ul style="list-style-type: none"> - A whole number which is a factor of two or more numbers (3 is a factor common to 6, 9, and 12)
Common Multiple	<ul style="list-style-type: none"> - A whole number that is a multiple of two or more numbers (12 is a multiple common to 2, 3, 4, and 6)
Commutative Property for Addition and Multiplication	<ul style="list-style-type: none"> - The rule stating that the order of addends or factors has no effect on the sum or product - $3 + 9 = 9 + 3$ and $4 \times 7 = 7 \times 4$
Compass	<ul style="list-style-type: none"> - A tool for drawing circles
Composite Number	<ul style="list-style-type: none"> - A number having at least one whole number factor other than 1 and itself

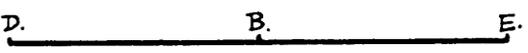
Cone	<ul style="list-style-type: none"> - A space figure with a circular base and a vertex 
Congruent	<ul style="list-style-type: none"> - Of equal size and shape; the symbol \cong means congruent  <ul style="list-style-type: none"> ▪ Triangles ABC and DEF are congruent.
Coordinate Plane	<ul style="list-style-type: none"> - A grid on a plane with two perpendicular lines of axes
Coordinates	<ul style="list-style-type: none"> - A pair of numbers which give the location of a point on a plane
Cross Product Method	<ul style="list-style-type: none"> - Means of testing for equivalent fractions <p>If $\frac{3}{5} = \frac{6}{10}$, then 3×10 will equal 5×6.</p>
Cube	<ul style="list-style-type: none"> - A space figure having six congruent, square faces 
Curve	<ul style="list-style-type: none"> - A set of points connected by a line segment 
Customary Units	<ul style="list-style-type: none"> - Units of the measurement system commonly used in a given country (inches, feet, pounds, ounces, and miles are customary units in the U.S.)
Cylinder	<ul style="list-style-type: none"> - A space figure having two congruent, circular bases 
Data	<ul style="list-style-type: none"> - Figures, facts or information
Decagon	<ul style="list-style-type: none"> - A ten-sided polygon 
Decimal Numeral	<ul style="list-style-type: none"> - A name for a fractional number expressed with a decimal point, such as .27 (4.03 is a mixed decimal)
Decimal System	<ul style="list-style-type: none"> - A numeration system based on grouping by tens

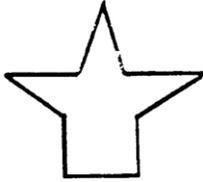
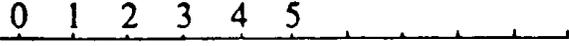
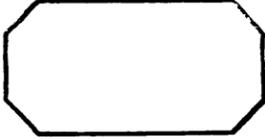
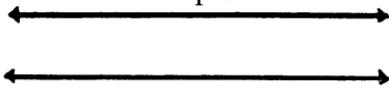
Degree	<ul style="list-style-type: none"> - 1. A unit of measure used in measuring angles (a circle contains 360 degrees) - 2. A unit for measuring temperature
Denominator	<ul style="list-style-type: none"> - The bottom number in a fraction; the denominator tells how many parts there are in a whole unit
Diagonal	<ul style="list-style-type: none"> - A line segment joining two nonadjacent vertices in a polygon  <ul style="list-style-type: none"> ▪ \overline{AC} is a diagonal in this figure.
Diameter	<ul style="list-style-type: none"> - A line segment which has its endpoints on a circle and which passes through the center of the circle  <ul style="list-style-type: none"> ▪ \overline{LM} is the diameter of this circle.
Difference	<ul style="list-style-type: none"> - 1. The distance between two numbers on the number line - 2. The result of subtracting the lesser from the greater
Digit	<ul style="list-style-type: none"> - A symbol used to write numerals; in the decimal system, there are ten digits (0-9)
Distributive Property for Multiplication Over Addition	<ul style="list-style-type: none"> - The rule stating that when the sum of two or more addends is multiplied by another number, each addend must be multiplied separately and then the products must be added together ▪ $3 \times (4 + 6 + 9) = (3 \times 4) + (3 \times 6) + (3 \times 9)$
Dividend	<ul style="list-style-type: none"> - A number which is to be divided in a division problem <p>In the equation $7 \overline{)63}$, 63 is the dividend.</p>
Divisibility	<ul style="list-style-type: none"> - A number is divisible by a given number if the quotient of the two numbers is a whole number ▪ 189 is divisible by 9 because $189 \div 9$ is a whole number.
Division	<ul style="list-style-type: none"> - The operation of finding a missing factor when the product and one factor are known
Divisor	<ul style="list-style-type: none"> - The factor used in a division problem for the purpose of finding the missing factor $12 \overline{)24} \quad \text{The divisor is 12.}$
Endpoint	<ul style="list-style-type: none"> - A point at the end of a line segment or ray  <ul style="list-style-type: none"> ▪ G is the endpoint of this ray
Equation	<ul style="list-style-type: none"> - A mathematical sentence which states that two expressions are equal ▪ $7 \times 9 = 3 + (4 \times 15)$
Equator	<ul style="list-style-type: none"> - An imaginary line at 0 degrees latitude on the earth's grid

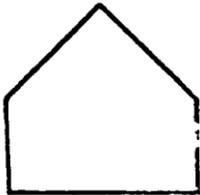
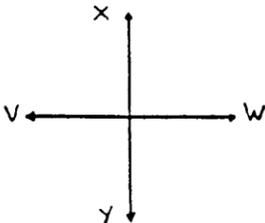
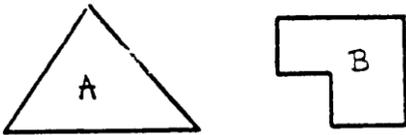
Equilateral	<ul style="list-style-type: none"> - Having sides of the same length <div style="text-align: center;">  </div> <ul style="list-style-type: none"> ▪ Figure ABC is an equilateral triangle. All of its sides are the same length.
Equivalent Fractions	<ul style="list-style-type: none"> - Fractions that name the same fractional number <p style="text-align: center;">$\frac{3}{4}$ and $\frac{9}{12}$ are equivalent.</p>
Estimate	<ul style="list-style-type: none"> - An approximation or rough calculation
Even Number	<ul style="list-style-type: none"> - One of the set of whole numbers having the number 2 as a factor
Expanded Notation	<ul style="list-style-type: none"> - The method of writing a numeral to show the value of each digit ▪ $5327 = 5000 + 300 + 20 + 7$
Exponent	<ul style="list-style-type: none"> - A numeral telling how many times a number is to be used as a factor ▪ In 6^3, the exponent is 3 $6^3 = 6 \times 6 \times 6 = 216$
Face	<ul style="list-style-type: none"> - A plane region serving as a side of a space figure
Factor	<ul style="list-style-type: none"> - One of two or more numbers that can be multiplied to find a product ▪ In the equation $6 \times 9 = 54$, 6 and 9 are factors
Factor Tree	<ul style="list-style-type: none"> - A pictorial means of showing the factors of a number <div style="text-align: center;">  </div>
Flip	<ul style="list-style-type: none"> - To “turn over” a geometric figure; the size or shape of the figure does not change <div style="text-align: center;">  </div>
Fraction	<ul style="list-style-type: none"> - The name for a fractional number written in the form $\frac{a}{b}$; a is the numerator, b is the denominator
Fractional Number	<ul style="list-style-type: none"> - A number that can be named as a fraction, $\frac{a}{b}$; the numerator and denominator can be any numbers with the exception that the denominator cannot be 0.
Geometry	<ul style="list-style-type: none"> - The study of space and figures in space
Gram	<ul style="list-style-type: none"> - A standard unit for measuring weight in the metric system
Graph	<ul style="list-style-type: none"> - A drawing showing relationships between sets of numbers
Greatest Common Factor	<ul style="list-style-type: none"> - The largest number that is a factor of two other numbers (6 is the greatest common factor of 18 and 24)

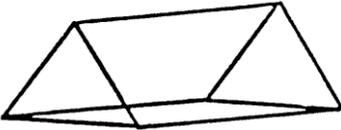
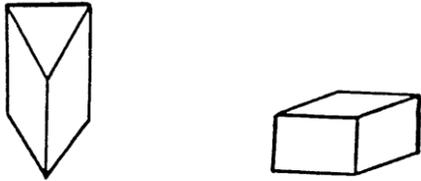
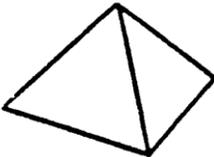
Grid	<ul style="list-style-type: none"> - A set of horizontal and vertical lines spaced uniformly 
Hemisphere	<ul style="list-style-type: none"> - Half of a sphere 
Heptagon	<ul style="list-style-type: none"> - A seven-sided polygon 
Hexagon	<ul style="list-style-type: none"> - A six-sided polygon 
Horizontal	<ul style="list-style-type: none"> - A line that runs parallel to a base line  <ul style="list-style-type: none"> ▪ Line \overline{GH} is a horizontal line.
Hypotenuse	<ul style="list-style-type: none"> - The longest side of a right triangle located opposite the right angle  <ul style="list-style-type: none"> ▪ Side \overline{OP} is the hypotenuse of this triangle
Identity Element For Addition	<ul style="list-style-type: none"> - 0 is the identity element for addition because any number plus 0 equals that number
Identity Element For Multiplication	<ul style="list-style-type: none"> - The number 1 is the identity element for multiplication because any number multiplied by 1 equals that number. <ul style="list-style-type: none"> ▪ $(17 \times 1 = 17)$
Improper Fraction	<ul style="list-style-type: none"> - A fraction having a numerator equal to or greater than the denominator, therefore naming a number of 1 or more <p style="text-align: center;">$\frac{9}{4}$ is an improper fraction.</p>
Inequality	<ul style="list-style-type: none"> - A number sentence showing that two groups of numbers stand for different numbers <p>The signs \neq , $<$, and $>$ show inequality. $7 + 5 \neq 12 - 9$</p>
Infinite Set	<ul style="list-style-type: none"> - A set having an unlimited number of members

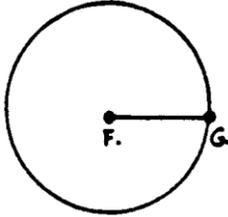
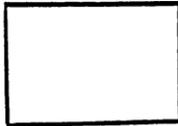
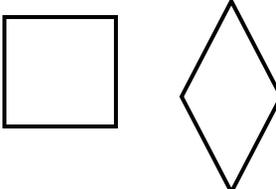
Integer	<ul style="list-style-type: none"> - Any member of the set of positive or negative counting numbers and 0 <ul style="list-style-type: none"> ▪ (... -4, -3, -2, -1, 0, 1, 2, 3, 4, ...)
Intersection of Lines	<ul style="list-style-type: none"> - The point at which two lines meet <div style="display: flex; align-items: center; justify-content: center;">  <div style="margin-left: 20px;"> <ul style="list-style-type: none"> ▪ Lines \overleftrightarrow{AB} and \overleftrightarrow{CD} intersect at point Y. </div> </div>
Intersection of Planes	<ul style="list-style-type: none"> - A line formed by the set of points at which two planes meet <div style="text-align: center;">  </div>
Inverse	<ul style="list-style-type: none"> - Opposite; addition and subtraction are inverse operations and multiplication is the inverse of division
Latitude	<ul style="list-style-type: none"> - The distance, measured in degrees, north or south of the equator; lines of latitude run parallel to the equator
Least Common Denominator	<ul style="list-style-type: none"> - The smallest whole number which is a multiple of the denominators of two or more fractions <p>The least common denominator for $\frac{1}{3}$ and $\frac{3}{4}$ is 12.</p>
Least Common Multiple	<ul style="list-style-type: none"> - The smallest whole number which is divisible by each of two or more given numbers <ul style="list-style-type: none"> ▪ The least common multiple of 2, 6, 9, and 18 is 18
Legs	<ul style="list-style-type: none"> - Sides adjacent to the right angle is a right triangle <div style="display: flex; align-items: center; justify-content: center;">  <div style="margin-left: 20px;"> <ul style="list-style-type: none"> ▪ \overline{QP} and \overline{QR} are legs in this triangle. </div> </div>
Like Fractions	<ul style="list-style-type: none"> - Fractions having the same denominator <p>$\frac{2}{9}$ and $\frac{12}{9}$ are like fractions.</p>
Line	<ul style="list-style-type: none"> - One of the four undefined terms of geometry used to define all other terms
Line of Symmetry	<ul style="list-style-type: none"> - A line on which a figure can be folded so that the two parts are exactly the same <div style="display: flex; align-items: center; justify-content: center;">  <div style="margin-left: 20px;"> <ul style="list-style-type: none"> ▪ Line \overleftrightarrow{ST} is the line of symmetry in this figure </div> </div>

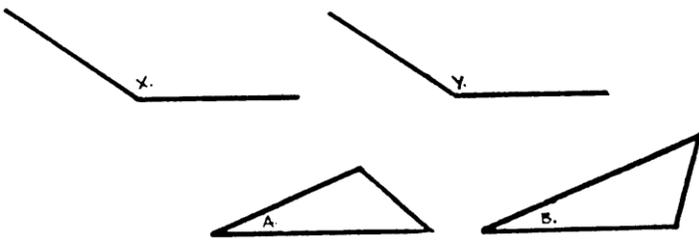
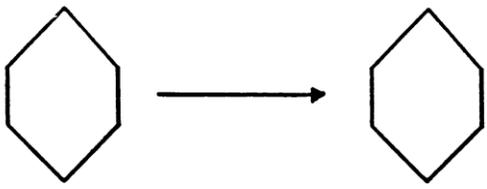
Line Segment	<ul style="list-style-type: none"> - Part of a line consisting of a path between two endpoints  <ul style="list-style-type: none"> ▪ \overline{AB} and \overline{CD} are line segments.
Linear Measure (or length)	<ul style="list-style-type: none"> - The measure of distance between two points along a line
Liter	<ul style="list-style-type: none"> - Metric system unit of measurement for liquid capacity
Longitude	<ul style="list-style-type: none"> - The distance, measured in degrees, east or west of the prime meridian; lines of longitude run north and south on the earth's grid, meeting at the poles
Lowest Terms	<ul style="list-style-type: none"> - When a fraction has a numerator and denominator with no common factor greater than 1, the fraction is in lowest terms <ul style="list-style-type: none"> ▪ $\frac{3}{7}$ is a fraction in lowest terms
Mean	<ul style="list-style-type: none"> - Average; the sum of numbers in a set divided by the number of addends <ul style="list-style-type: none"> ▪ The mean of 6, 8, 9, 19, and 38 is $\frac{80}{5}$ or 16.
Measurement	<ul style="list-style-type: none"> - The process of finding the length, area, capacity, or amount of something
Median	<ul style="list-style-type: none"> - The middle number in a set of numbers; the median is determined by arranging numbers in order from lowest to highest and by counting to the middle <ul style="list-style-type: none"> ▪ The median of (3, 8, 12, 17, 20, 23, 27) is 17
Meter	<ul style="list-style-type: none"> - A metric system unit of linear measurement
Metric System	<ul style="list-style-type: none"> - A system of measurement based on the decimal system
Midpoint	<ul style="list-style-type: none"> - A point that divides a line segment into two congruent segments  <ul style="list-style-type: none"> ▪ Point B is the midpoint of DE.
Mixed Numeral	<ul style="list-style-type: none"> - A numeral that includes a whole number and a fractional number or a whole number and a decimal <ul style="list-style-type: none"> ▪ $7\frac{1}{2}$ and 37.016 are mixed numerals.
Multiple	<ul style="list-style-type: none"> - The product of two whole numbers
Multiplication	<ul style="list-style-type: none"> - An operation involving repeated addition <ul style="list-style-type: none"> ▪ $4 \times 5 = 4 + 4 + 4 + 4 + 4$
Multiplicative Inverse	<ul style="list-style-type: none"> - For any given number, the number that will yield a product of 1 <ul style="list-style-type: none"> ▪ $\frac{4}{3}$ is the multiplicative inverse of $\frac{3}{4}$ because $\frac{4}{3} \times \frac{3}{4} = 1$.
Negative Integer	<ul style="list-style-type: none"> - One of a set of counting numbers that is less than 0

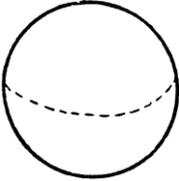
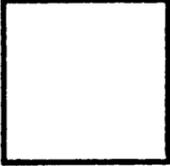
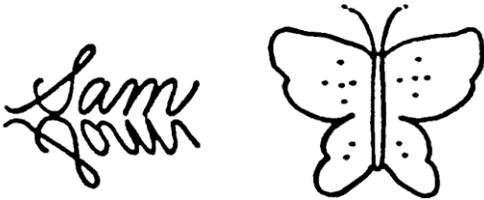
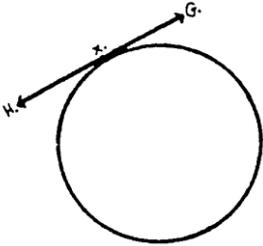
Nonagon	<ul style="list-style-type: none"> - A nine-sided polygon 
Number	<ul style="list-style-type: none"> - A mathematical idea concerning the amount contained in a set
Number Line	<ul style="list-style-type: none"> - A line which has numbers corresponding to points along it 
Numeral	<ul style="list-style-type: none"> - A symbol used to represent or name a number
Numeration System	<ul style="list-style-type: none"> - A system of symbols used to express numbers
Numerator	<ul style="list-style-type: none"> - The number above the line in a fraction
Octagon	<ul style="list-style-type: none"> - An eight-sided polygon 
Odd Number	<ul style="list-style-type: none"> - A whole number belonging to the set of numbers equal to $(n \times 2) + 1$ <ul style="list-style-type: none"> ▪ (1, 3, 5, 7, 9 ...) are odd numbers.
Odd Against	<ul style="list-style-type: none"> - The ratio of the number of unfavorable outcomes to the number of favorable outcomes
Odds in Favor	<ul style="list-style-type: none"> - The ratio of the number of favorable outcomes to the number of unfavorable outcomes
Opposite Property	<ul style="list-style-type: none"> - A property which states that if the sum of two numbers is 0, then each number is the opposite of the other <ul style="list-style-type: none"> ▪ $-4 + 4 = 0$; -4 and 4 are opposites
Ordered Pair	<ul style="list-style-type: none"> - A pair of numbers in a certain order with the order being of significance
Ordinal Number	<ul style="list-style-type: none"> - A number telling the place of an item in an ordered set (sixth, eighth, etc.)
Origin	<ul style="list-style-type: none"> - The beginning point on a number line; the origin is often 0
Outcome	<ul style="list-style-type: none"> - A possible result in a probability experiment
Palindrome	<ul style="list-style-type: none"> - A number which reads the same forward and backward <ul style="list-style-type: none"> ▪ (343, 87678, 91219, etc.)
Parallel Lines	<ul style="list-style-type: none"> - Lines in the same plane which do not intersect <ul style="list-style-type: none"> ▪ These lines are parallel 

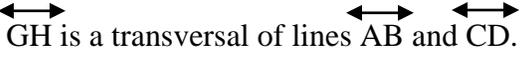
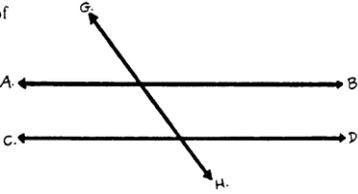
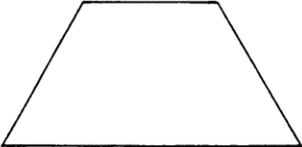
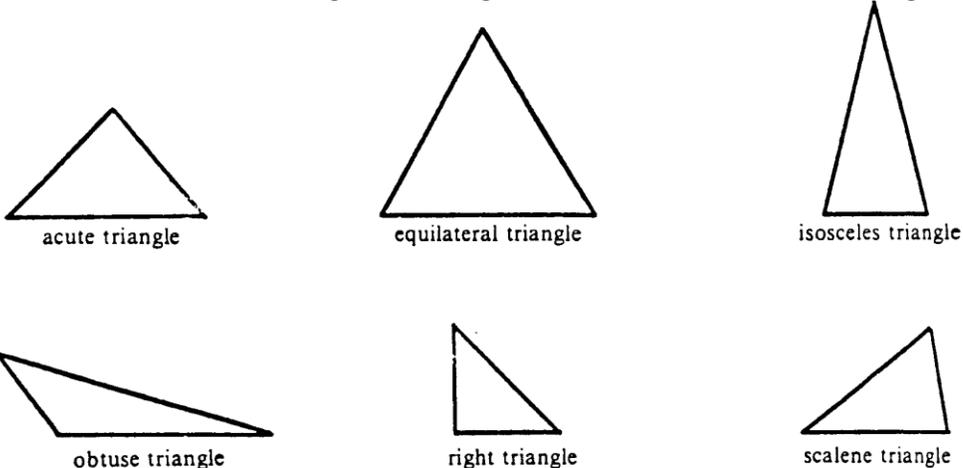
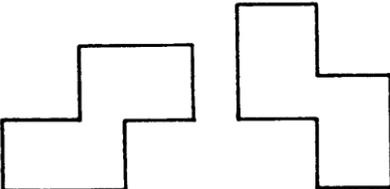
Parallelogram	- A quadrilateral whose opposite sides are parallel
Pentagon	- A five-sided polygon 
Percent	- A comparison of a number with 100 <ul style="list-style-type: none"> 43 compared to 100 is 43%
Perimeter	- The distance around the outside of a closed figure
Periods	- Groups of three digits in numbers <p style="text-align: center;"> \swarrow \searrow 723,301,611 millions period thousands period units period </p>
Perpendicular Lines	- Two lines in the same plane that intersect at right angles <ul style="list-style-type: none"> These lines are perpendicular to one another 
Pi	- The ratio of a circle's circumference to its diameter <ul style="list-style-type: none"> Pi = 3.14159265 (a non-termination decimal) The symbol π signifies pi.
Pictograph	- A graph that uses pictures or symbols to represent numbers
Place Value	- The value assigned to a digit due to its position in a numeral
Plane	- The set of all points on a flat surface which extends indefinitely in all directions
Plane Figure	- A set of points in the same plane enclosing a region <ul style="list-style-type: none"> Figures A and B are plane figures. 
Point	- One of the four undefined terms in geometry used to define all other terms
Polygon	- A simple, closed plane figure having line segments as sides 

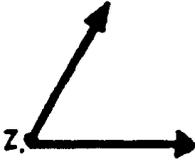
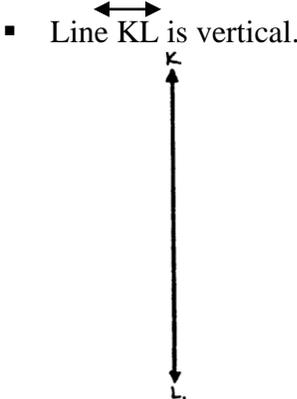
Polyhedron	<ul style="list-style-type: none"> - A space figure formed by intersecting plane surfaces called faces 
Positive Integer	<ul style="list-style-type: none"> - One of a set of counting numbers that is greater than 0
Prime Factor	<ul style="list-style-type: none"> - A factor that is a prime number <ul style="list-style-type: none"> ▪ 1, 2, and 5 are prime factors of 20
Prime Number	<ul style="list-style-type: none"> - A number whose only number factors are 1 and itself
Prism	<ul style="list-style-type: none"> - A space figure with two parallel, congruent polygonal faces (called bases); a prism is named by the shape of its bases  <p style="text-align: center;"> triangular prism rectangular prism </p>
Probability	<ul style="list-style-type: none"> - A study of the likelihood that an event will occur
Product	<ul style="list-style-type: none"> - The answer in a multiplication problem
Property of One	<ul style="list-style-type: none"> - A property which states that any number multiplied by 1 will equal that number
Property of Zero	<ul style="list-style-type: none"> - A property which states that any number plus zero equals that number
Proportion	<ul style="list-style-type: none"> - A number statement of equality between two ratios - $\frac{3}{7} = \frac{9}{21}$
Protractor	<ul style="list-style-type: none"> - An instrument used for measuring angles
Pyramid	<ul style="list-style-type: none"> - A space figure having one polygonal base and four triangular faces which have a common vertex 
Quadrilateral	<ul style="list-style-type: none"> - A four-sided polygon 
Quotient	<ul style="list-style-type: none"> - The answer in a division problem

<p>Radius</p>	<ul style="list-style-type: none"> - A line segment having one endpoint in the center of the circle and another on the <u>circle</u> <ul style="list-style-type: none"> ▪ \overline{FG} is the radius of this circle. 
<p>Rate</p>	<ul style="list-style-type: none"> - A comparison of two quantities
<p>Ratio</p>	<ul style="list-style-type: none"> - A comparison of two numbers expressed as $\frac{a}{b}$
<p>Ray</p>	<ul style="list-style-type: none"> - A portion of a line extending from one endpoint in one direction indefinitely
<p>Reciprocal Method For Dividing Fractions</p>	<ul style="list-style-type: none"> - A means of dividing fractions that involves replacing the divisor with its reciprocal and then multiplying <ul style="list-style-type: none"> ▪ $\frac{2}{3} \div \frac{4}{7} = \frac{2}{3} \times \frac{7}{4} = \frac{14}{12} = 1\frac{1}{6}$
<p>Reciprocals</p>	<ul style="list-style-type: none"> - A pair of numbers whose product is one <ul style="list-style-type: none"> ▪ $\frac{1}{2}$ and $\frac{2}{1}$ are reciprocals.
<p>Rectangle</p>	<ul style="list-style-type: none"> - A parallelogram having four right angles 
<p>Region</p>	<ul style="list-style-type: none"> - The set of all points on a closed curve and in its interior
<p>Remainder</p>	<ul style="list-style-type: none"> - The number (less than the divisor) that is left after a division problem is completed $\begin{array}{r} 20 \\ 21 \overline{)426} \\ \underline{420} \\ 6 \end{array} \quad 6 = \text{remainder}$
<p>Rename</p>	<ul style="list-style-type: none"> - To name numbers with a different set of numerals
<p>Repeating Decimal</p>	<ul style="list-style-type: none"> - A decimal in which a certain set of digits repeats without end (0.363636)
<p>Rhombus</p>	<ul style="list-style-type: none"> - A parallelogram having congruent sides 

Roman Numerals	- Numerals used by the Romans for keeping records
Rounding	- Disregarding all digits in a number beyond a certain significance
Scale Drawing	- A drawing of an object with all distances in proportion to the corresponding distances on the actual object
Scientific Notation	- A number expressed as a decimal number (usually with an absolute value less than 10) multiplied by a power of 10 <ul style="list-style-type: none"> ▪ $4.53 \times 10^3 = 4530$
Segment	- Two points and all of the points on the line or arc between them
Sequence	- A continuous series of numbers ordered according to a pattern
Similarity	- A property of geometric figures having angles of the same size <ul style="list-style-type: none"> ▪ Angles X and Y are similar ▪ Triangles A and B are similar 
Simple Closed Curve or Figure	- A closed curve whose path does not intersect itself 
Skip Count	- Counting by skipping a certain number of digits (counting by 2s, 5s, and 10s, etc.)
Slide	- Moving a figure without turning or flipping it; the shape or size of a figure is not changed by a slide 
Solution	- The number that replaces a variable to complete an equation
Space Figure	- A figure which consists of a set of points in two or more planes

Sphere	<ul style="list-style-type: none"> - A space figure formed by a set of points equidistant from a center point 
Square	<ul style="list-style-type: none"> - A rectangle with congruent sides 
Statistics	<ul style="list-style-type: none"> - Numerical observations or data
Subtraction	<ul style="list-style-type: none"> - The operation of finding a missing addend when one addend and the sum are known
Sum	<ul style="list-style-type: none"> - The answer in an addition problem resulting from the combination of two addends
Surface	<ul style="list-style-type: none"> - A region lying on one plane
Surface Area	<ul style="list-style-type: none"> - The space covered by a plane region or by the faces of a space figure
Symmetric Figure	<ul style="list-style-type: none"> - A figure having two halves that are reflections of one another; a line of symmetry divides the figure into two congruent parts <ul style="list-style-type: none"> ▪ These figures are symmetric. 
Tangent	<ul style="list-style-type: none"> - A line which touches a curve at only one point <ul style="list-style-type: none"> ▪ Line GH is tangent to the circle at point X. 
Terms of a Fraction	<ul style="list-style-type: none"> - The numerator and denominator of a fraction

<p>Transversal</p>	<ul style="list-style-type: none"> - A line that intersects two or more parallel lines <ul style="list-style-type: none"> ▪  GH is a transversal of lines AB and CD. 
<p>Trapezoid</p>	<ul style="list-style-type: none"> - A quadrilateral having only two parallel sides 
<p>Triangle</p>	<ul style="list-style-type: none"> - A three-sided polygon <ul style="list-style-type: none"> ▪ Acute Triangle – a triangle in which all three angles are less than 90° ▪ Equilateral Triangle – a triangle with three congruent sides and three congruent angles ▪ Isosceles Triangle – a triangle with at least two congruent sides ▪ Obtuse Triangle – a triangle having one angle greater than 90° ▪ Right triangle – a triangle having one 90° angle ▪ Scalene Triangle – a triangle in which no two sides are congruent  <p style="text-align: center;"> acute triangle equilateral triangle isosceles triangle </p> <p style="text-align: center;"> obtuse triangle right triangle scalene triangle </p>
<p>Turn</p>	<ul style="list-style-type: none"> - A move in geometry which involves turning, but not flipping, a figure; the size or shape of a figure is not changed by a turn 
<p>Unit</p>	<ul style="list-style-type: none"> - 1. The first whole number - 2. A determined quantity used as a standard for measurement

Vertex	<ul style="list-style-type: none"> - A common endpoint of two rays forming an angle, two line segments forming sides of a polygon, or two planes forming a polyhedron <ul style="list-style-type: none"> ▪ Point Z is the vertex of this angle 
Vertical	<ul style="list-style-type: none"> - A line that is perpendicular to a horizontal base line <ul style="list-style-type: none"> ▪ Line KL is vertical. 
Volume	<ul style="list-style-type: none"> - The measure of capacity or space enclosed by a space figure
Whole Number	<ul style="list-style-type: none"> - A member of the set of numbers (0, 1, 2, 3, 4 ...)
X-Axis	<ul style="list-style-type: none"> - The horizontal number line on a coordinate grid
Y-Axis	<ul style="list-style-type: none"> - The vertical number line on a coordinate grid
Zero	<ul style="list-style-type: none"> - The number of members in an empty set