


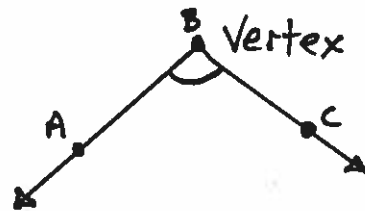
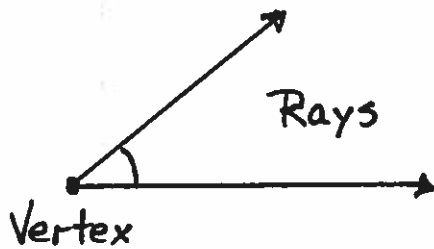
# ANGLES Instructional Sheet

Angles are fun to work with, and you will notice angles all around you!

It is important that you understand the PARTS of an angle and the 7 DIFFERENT types.

The Parts of an Angle:

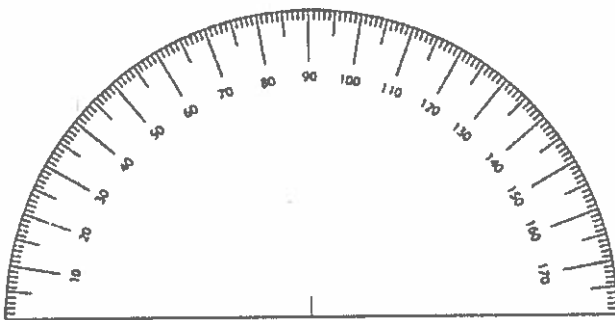
- an angle is made up of 2 rays that join at a point called a vertex
- a RAY is a straight extending from a point to infinity (  )
- a VERTEX is a point where 2 or more lines or edges meet



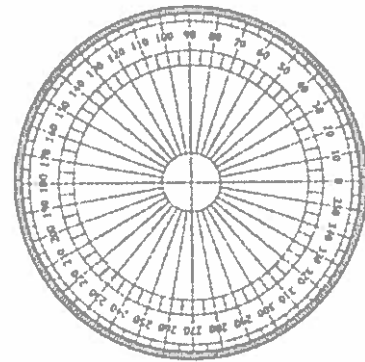
Angle ABC is written  $\angle ABC$

How are angles measured? - by a Protractor!

- protractors can range from  $0^\circ - 180^\circ$  (half circle) or  $0^\circ - 360^\circ$  (full circle)

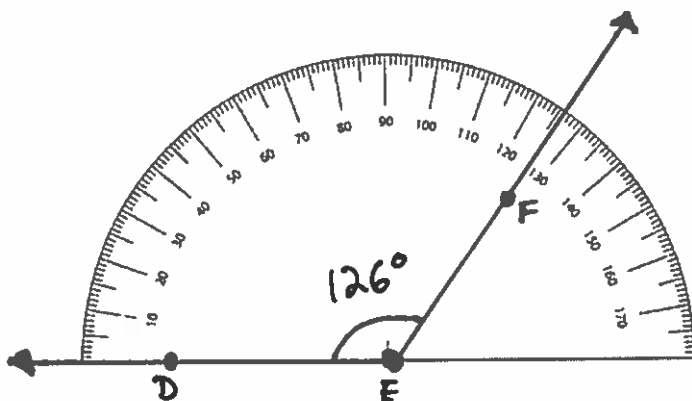


Half Circle Protractor

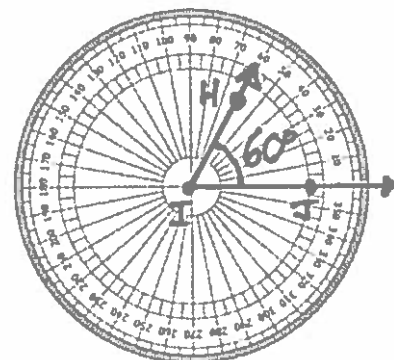


Full Circle Protractor

- you measure the angle by placing the vertex (joining point) in the center of the protractor, and line up one of the rays along the bottom (with a half circle protractor) or the zero (0) line (with the full circle protractor). You then line up the second ray with the number value, and that gives you the degree value (ie.  $35^\circ$ )



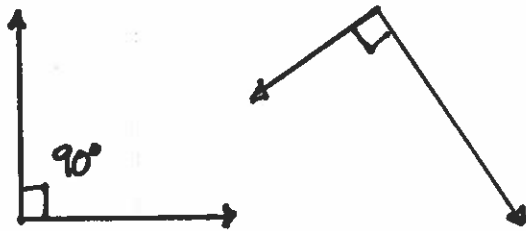
$\angle DEF = 126^\circ$



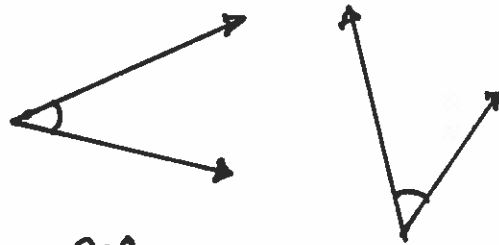
$\angle HIJ = 60^\circ$

The 7 Types of Angles:

1) Right Angle (has a value of  $90^\circ$ )

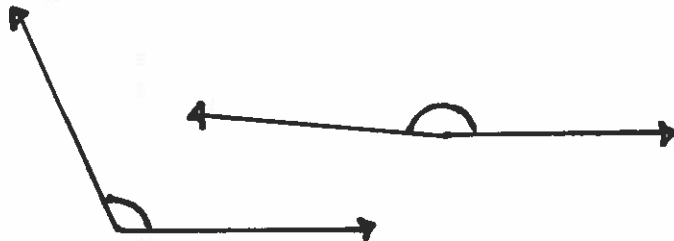


2) Acute Angle (has a value less than  $90^\circ$ )

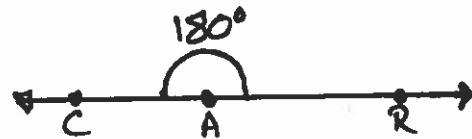


\* The square symbol at the vertex means  $90^\circ$

3) Obtuse Angle (has a value between  $90^\circ$  and  $180^\circ$ )



4) Straight Angle (has a value of  $180^\circ$ )

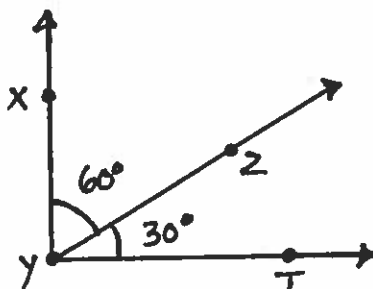


$\angle CAR$  is a Straight Angle  
A is the Vertex

5) Reflex Angle (has a value between  $180^\circ$  and  $360^\circ$ )

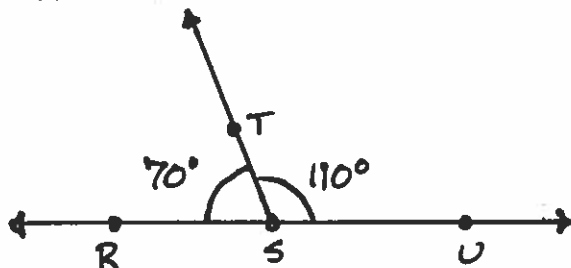


6) Complementary Angles (the angles add up to  $90^\circ$ )



$\angle ZYT$  and  $\angle XYZ$  are Complementary  
because together they equal  $90^\circ$   
 $\angle XYT = 90^\circ$  (RIGHT Angle)

7) Supplementary Angles (the angles add up to  $180^\circ$ )



$\angle RST = 70^\circ$  (ACUTE)  
 $\angle TSU = 110^\circ$  (OBTUSE)

Together they are Supplementary  
as they equal  $180^\circ$

$\angle RSU = 180^\circ$  (STRAIGHT Angle)