

# Friday, September 5

Objective

SWBAT-

- Measure, classify and draw angles

DO NOW

The endpoints of two segments are given. Find the midpoint between them. Find the distance between them

$$\overline{AB}: A(2, 6), B(0, 3)$$

① Midpoint:

② Distance:

$$\overline{CD}: C(-1, 0), D(1, 3)$$

③ Midpoint:

④ Distance:

HW: none

# 1.4 Measuring and Classifying Angles

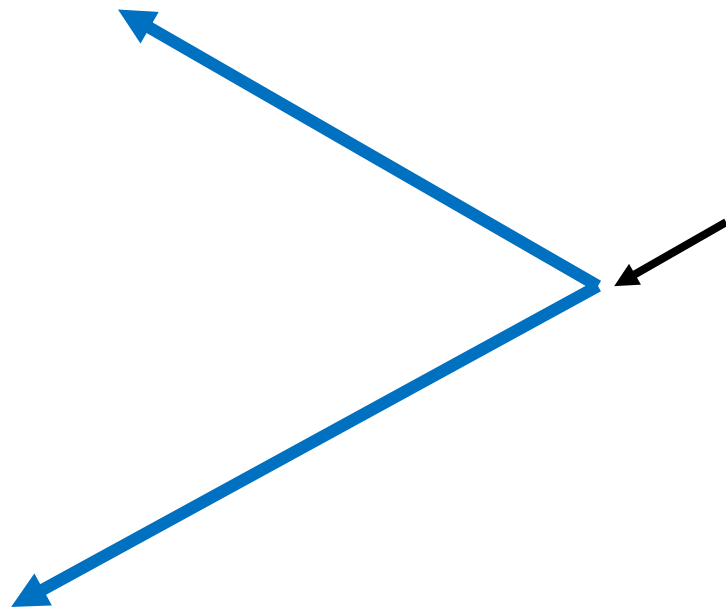
Agenda:

- **Do Now** (12 min)
  - ✓ Work and Solve
  - ✓ **Warm-Up Quiz**
- **Introduction to New Material** (13 min)
  - ✓ Angles, Tycho Brahe
- **Guided Practice** (12 min)
  - ✓ Drawing Angles with the protractor
- **Independent Practice** (10 min)
  - ✓ Drawing more angles
- **Exit Ticket** (5 min)
  - ✓ Top Ten Results

# 1.4 Measuring and Classifying Angles

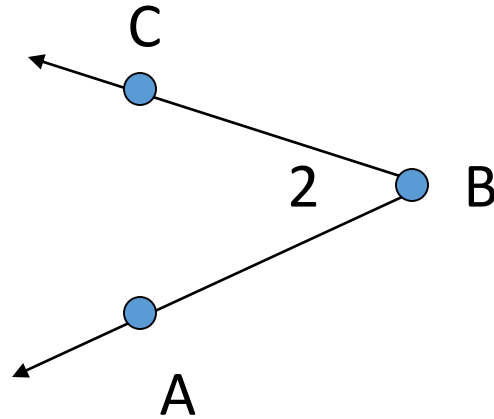
An angle is made up of 2 rays with a common end point.

Angles are measured in units called degrees.



Vertex- the point where the 2 rays meet.

# 1.4 Measuring and Classifying Angles



You can use the symbol  $\angle$  to name the angle.

$\angle ABC$  or  $\angle CBA$

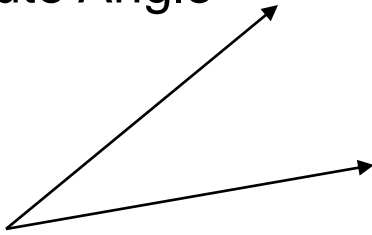
Always use the vertex as the middle letter.

$\angle B$  Use the vertex only

$\angle 2$  Use a number (if present)

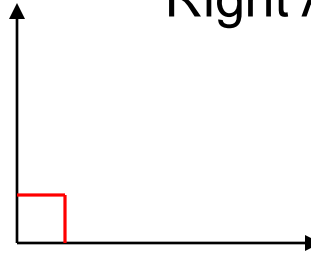
# 1.4 Measuring and Classifying Angles

Acute Angle



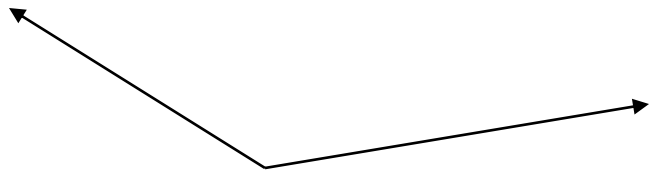
Measure less than  $90^\circ$

Right Angle



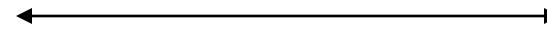
Measure exactly  $90^\circ$

Obtuse Angle



Measure between  $90^\circ$  and  $180^\circ$

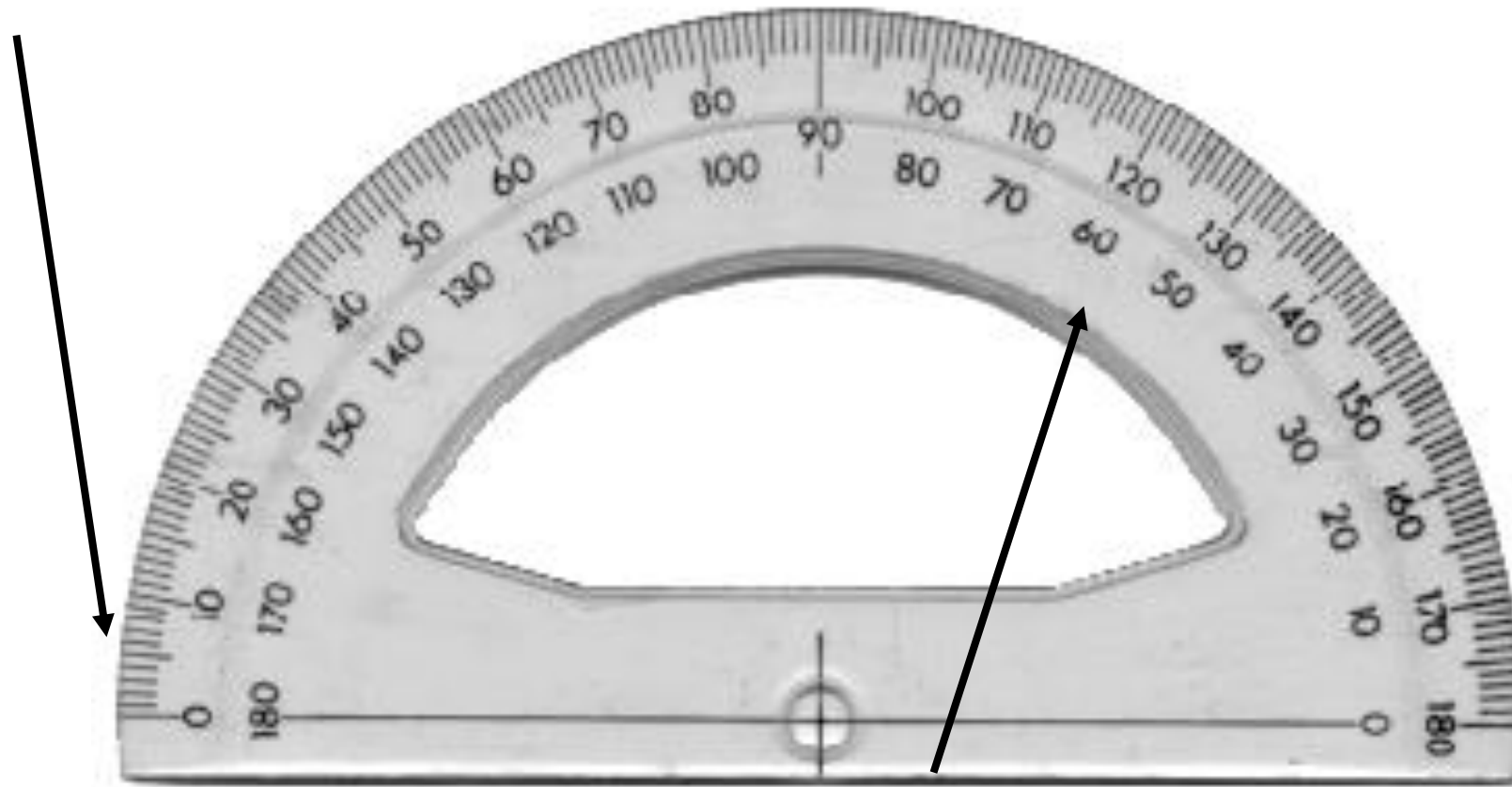
Straight Angle



Measure exactly  $180^\circ$

# 1.4 Measuring and Classifying Angles

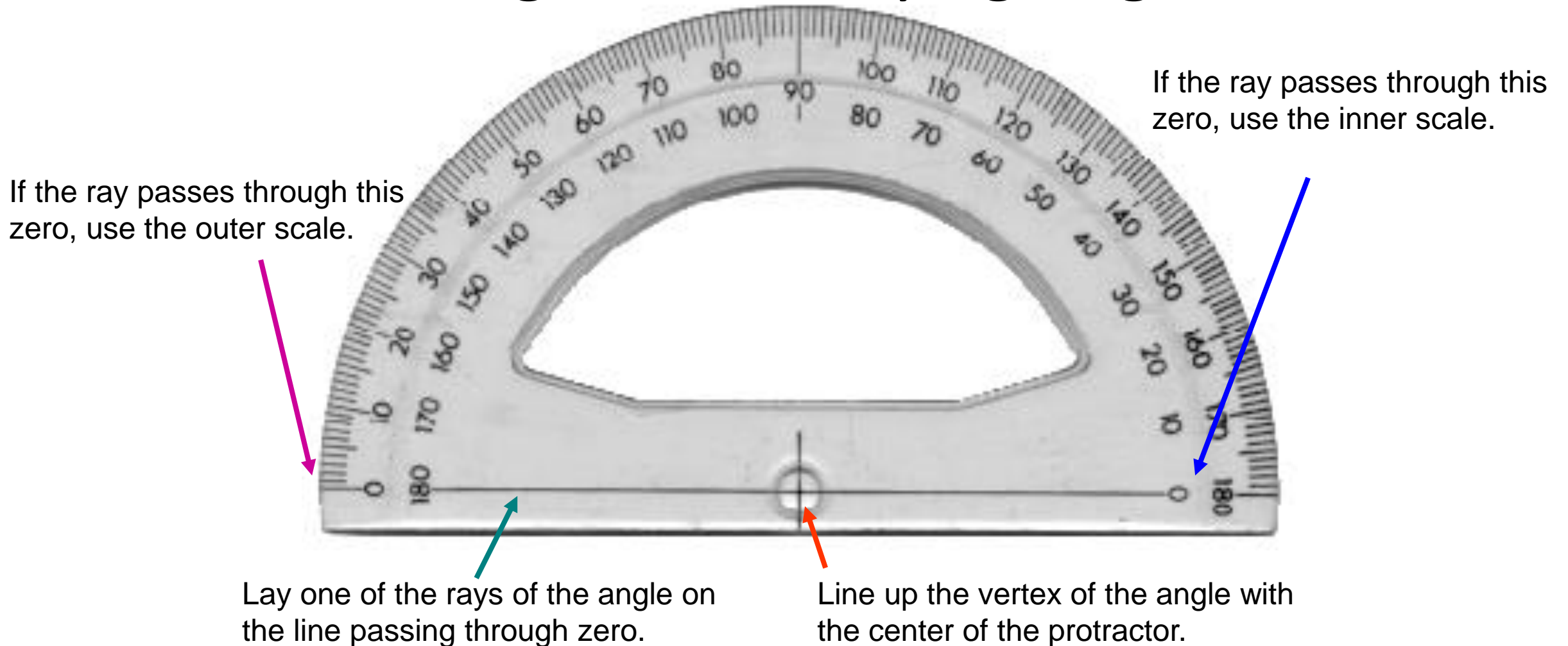
The outer scale goes from 0 to 180 from left to right.



Protractor

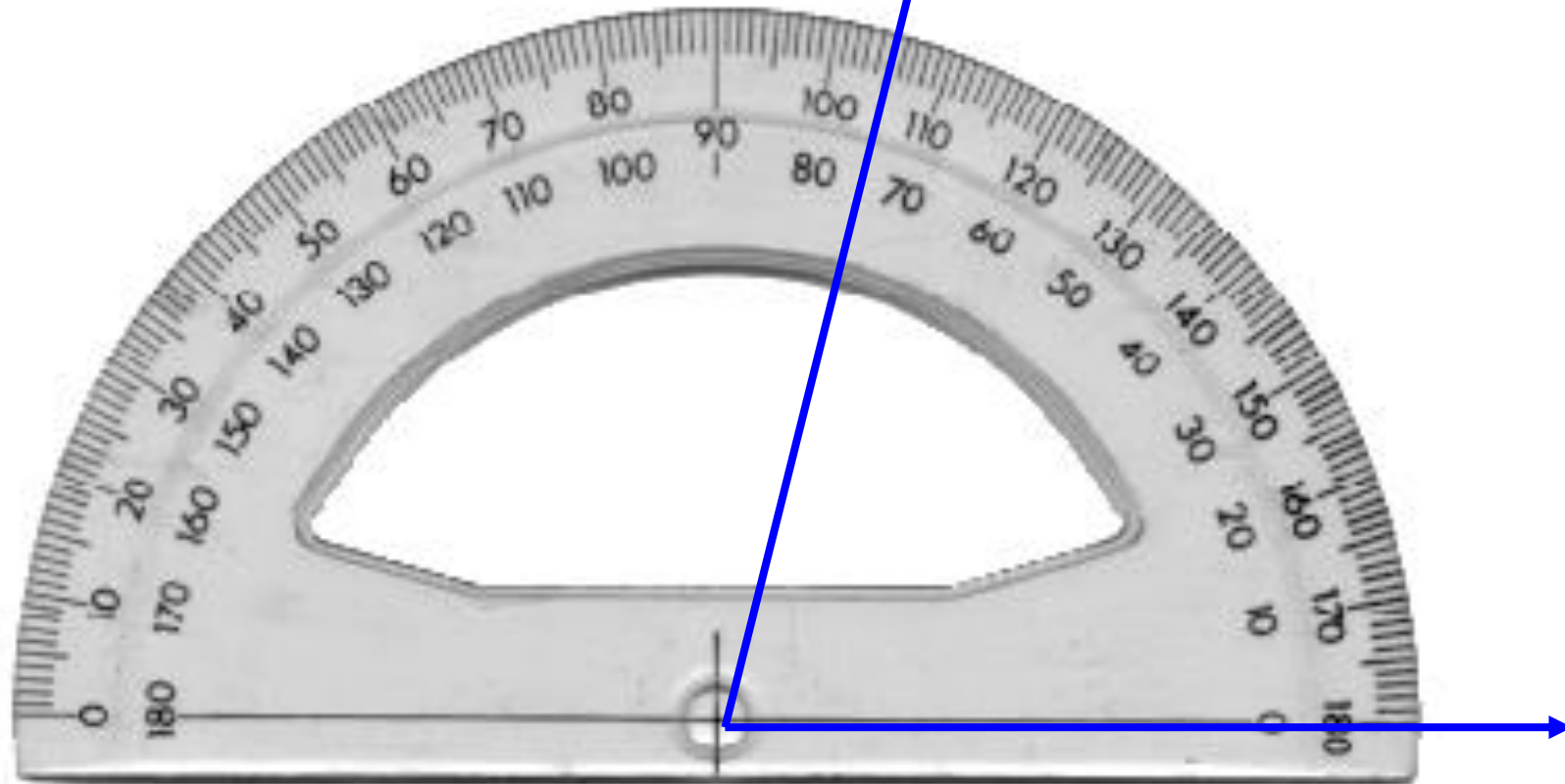
The inner scale goes from 0 to 180 from right to left.

# 1.4 Measuring and Classifying Angles



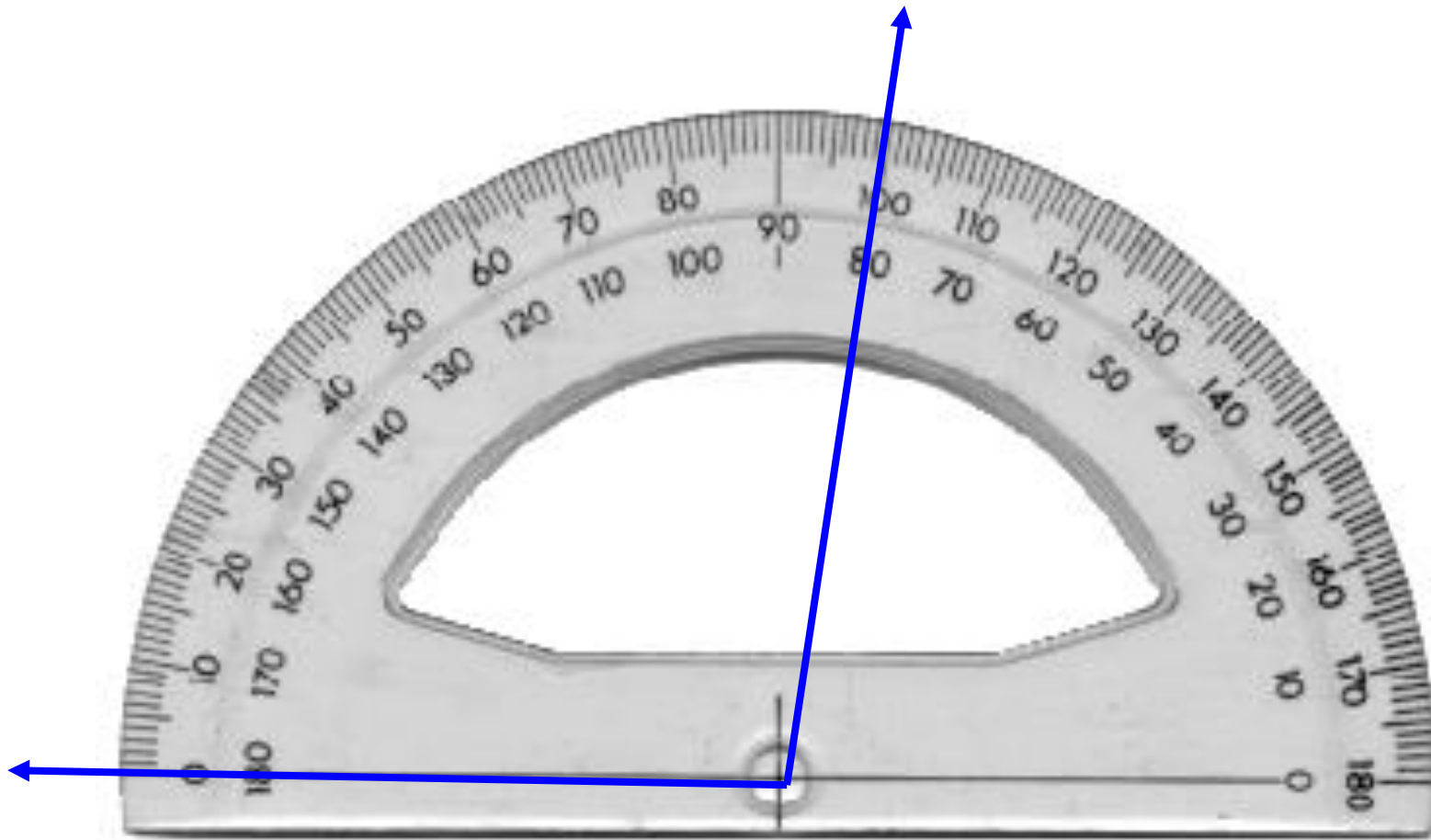
How to measure an angle

# 1.4 Measuring and Classifying Angles



Measure this angle from the inner scale.  
This angle measures  $75^\circ$





Measure this angle from the outer scale.  
This angle measures  $100^\circ$

# 1.4 Measuring and Classifying Angles

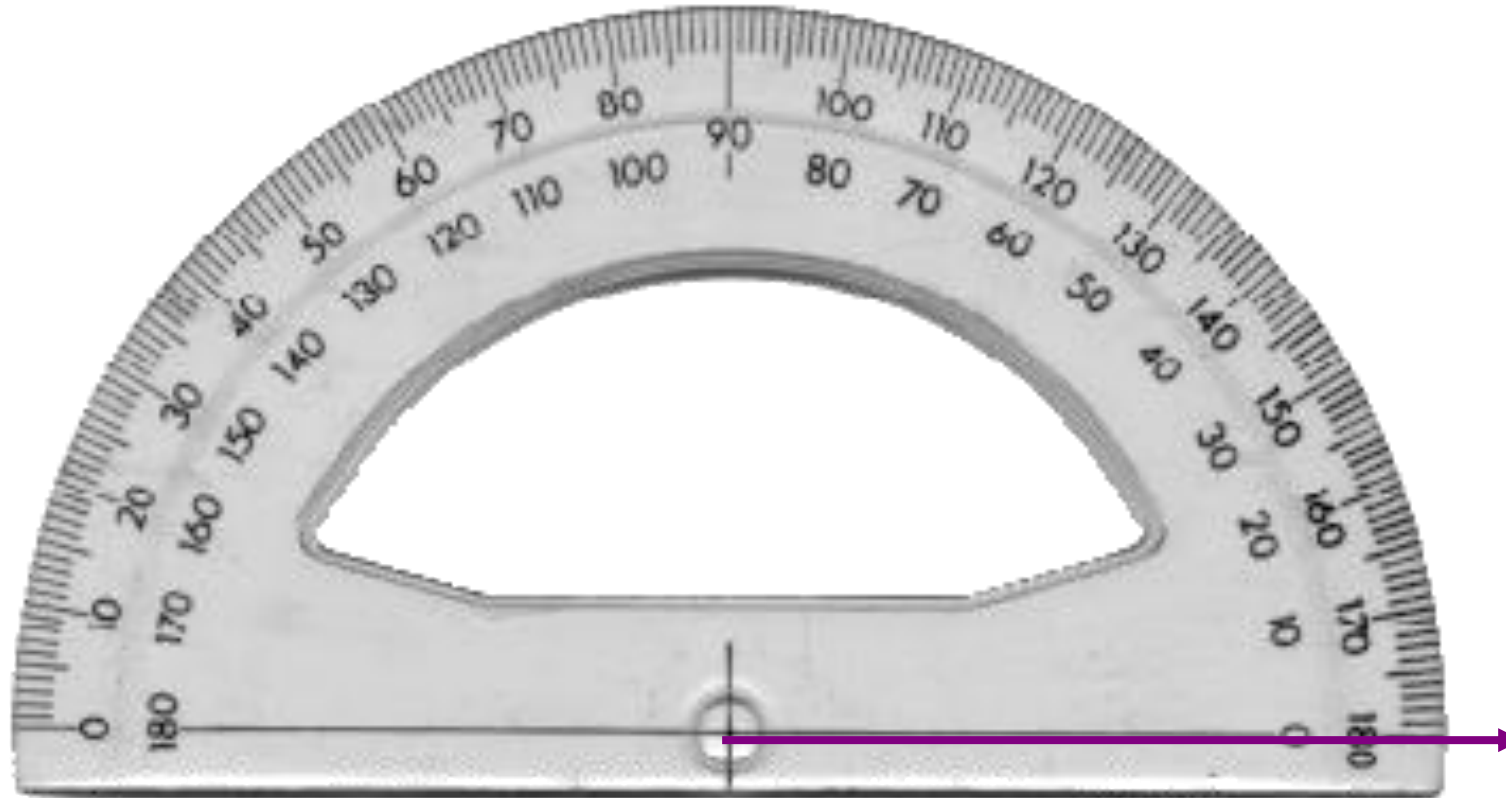
Draw an Angle that measures  $60^\circ$

First draw a ray.

Next lay the  
protractor on top  
of the ray with the  
end point at the  
center of the ray.

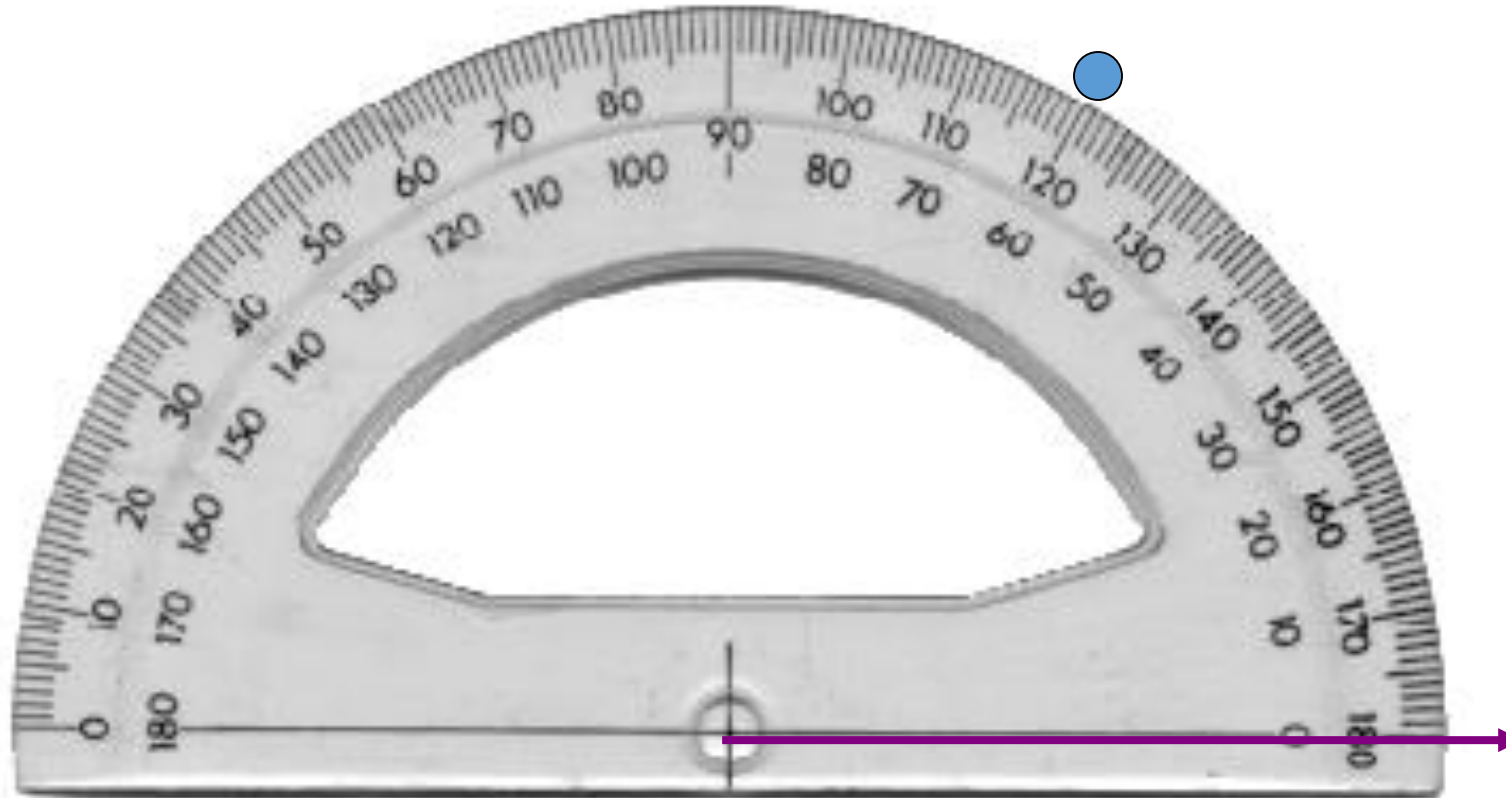


# 1.4 Measuring and Classifying Angles



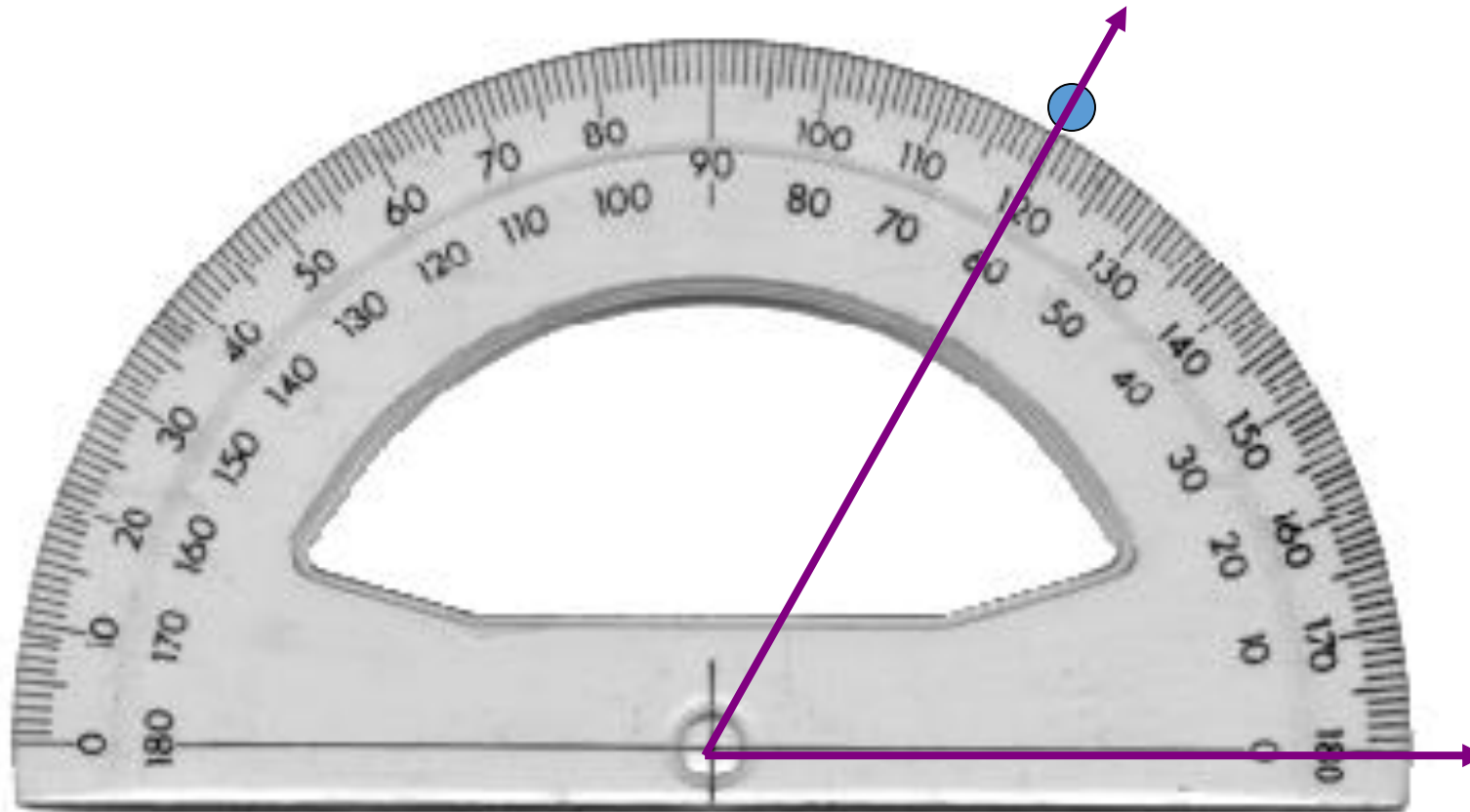
Line up the ray with the protractor line. Align the ray's endpoint with the aperture (opening) of the protractor

# 1.4 Measuring and Classifying Angles



Mark the point on the protractor that you want the other ray to pass through.

# 1.4 Measuring and Classifying Angles



Then draw the other ray passing it through this point.

# 1.4 Measuring and Classifying Angles

Draw your own angle that measures 50

Remember to line up the vertex with the center point.

If you need to, extend the ray so that it passes through the zero mark.

# 1.4 Measuring and Classifying Angles

Draw any two angles in your notebook.

Pass it to a partner in your group and find the angle that your partner made.

Was your measurement of your group member's angles correct?