

ACTIVITY 13– CIRCLES

1. What we have to do?

To discover the relationship between angle subtended by an arc at the centre and angle subtended by it at any other point on the remaining part of the circle.

2. What is required?

Colored paper, sketch pens, geometry kit , a pair of scissors and Glue.

3. What do you need to know?

Basic terminology related to the circle, angle subtended by an arc at the centre and at any point on the remaining part of the circle.

4. How will you proceed?

- Take four different colors of paper say green, yellow , red and blue.
- Draw four circles of radii 3 cm with centre O .
- Keep all circles one above the other and fold them to make a crease to represent same chord in all the four circles.
- Draw chord AB at the crease on each circle.
- In green circle, join OA and OB .
- Take yellow and red circle and keep them one above the other circle .Form an angle at the circumference by paper folding and draw angle ACB on both circles.
- Cut a part of yellow angle LCM and red angle QCR with the help of scissors and paste them in angle AOB in blue circle.(as shown in the figure below)

5. What have you observed?

_____ and _____ angles have completely filled angle AOB in blue circle.

This implies $2\angle$ _____ $= \angle$ _____

6. What have you learnt?

7. What would you be interested in doing?

Prove the same when chord is the longest chord of the circle.

Real life application :- The above result is used in proving many relations and theorems on Geometry.

