

# Activity 18

## OBJECTIVE

To verify experimentally that in a triangle, the longer side has the greater angle opposite to it.

## MATERIAL REQUIRED

Coloured paper, scissors, tracing paper, geometry box, cardboard sheet, sketch pens.

## METHOD OF CONSTRUCTION

1. Take a piece of cardboard of a convenient size and paste a white paper on it.
2. Cut out a  $\Delta ABC$  from a coloured paper and paste it on the cardboard [see Fig. 1].
3. Measure the lengths of the sides of  $\Delta ABC$ .
4. Colour all the angles of the triangle ABC as shown in Fig. 2.
5. Make the cut-out of the angle opposite to the longest side using a tracing paper [see Fig. 3].

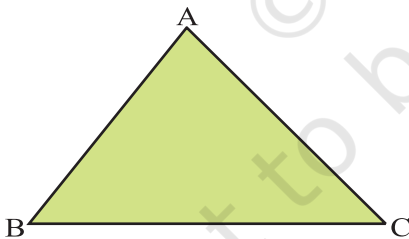


Fig. 1

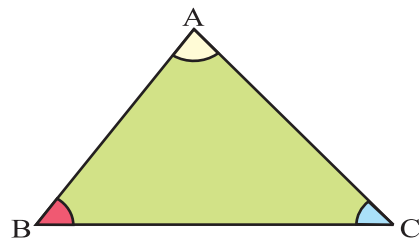


Fig. 2

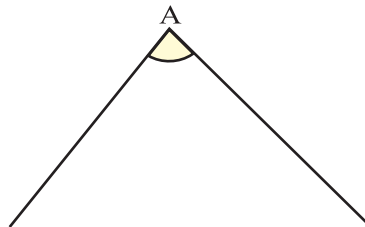


Fig. 3

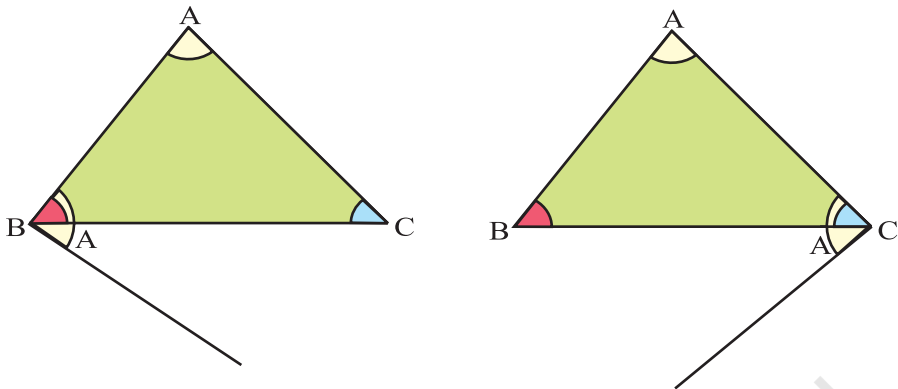


Fig. 4

### DEMONSTRATION

Take the cut-out angle and compare it with other two angles as shown in Fig. 4.

$\angle A$  is greater than both  $\angle B$  and  $\angle C$ .

i.e., the angle opposite the longer side is greater than the angle opposite the other side.

### OBSERVATION

Length of side AB = .....

Length of side BC = .....

Length of side CA = .....

Measure of the angle opposite to longest side = .....

Measure of the other two angles = ..... and .....

The angle opposite the ..... side is ..... than either of the other two angles.

### APPLICATION

The result may be used in solving different geometrical problems.