

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 $\triangle ABC$ from a coloured paper and paste it on the cardboard [see Fig. 1].
3. Measure the lengths of the sides of $\triangle ABC$.
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].

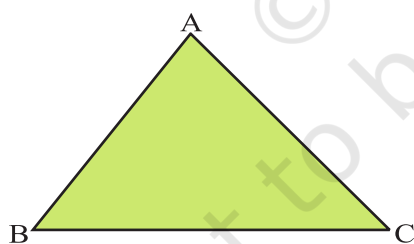


Fig. 1

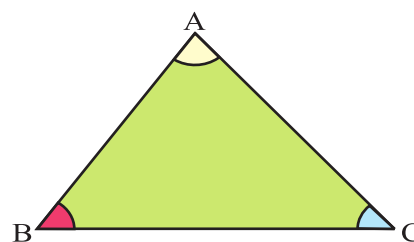


Fig. 2

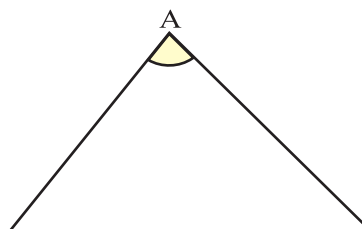


Fig. 3

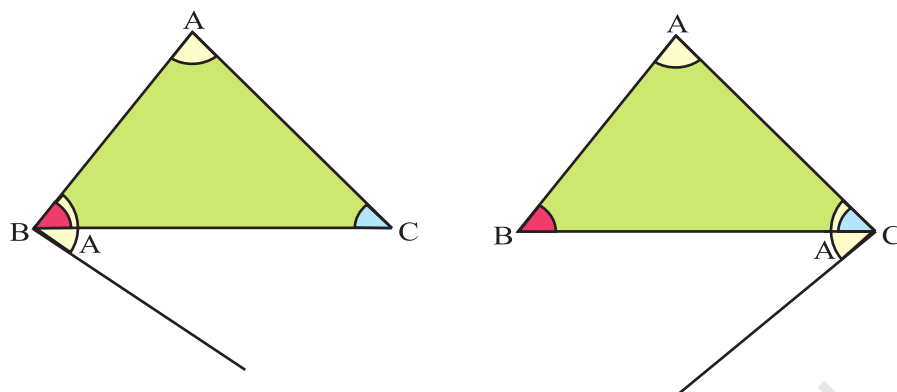


Fig. 4

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.