

Activity 15

OBJECTIVE

To verify that the sum of the angles of a triangle is 180° .

MATERIAL REQUIRED

Hardboard sheet, glazed papers, sketch pens/pencils, adhesive, cutter, tracing paper, drawing sheet, geometry box.

METHOD OF CONSTRUCTION

1. Take a hardboard sheet of a convenient size and paste a white paper on it.
2. Cut out a triangle from a drawing sheet, and paste it on the hardboard and name it as $\triangle ABC$.
3. Mark its three angles as shown in Fig. 1
4. Cut out the angles respectively equal to $\angle A$, $\angle B$ and $\angle C$ from a drawing sheet using tracing paper [see Fig. 2].

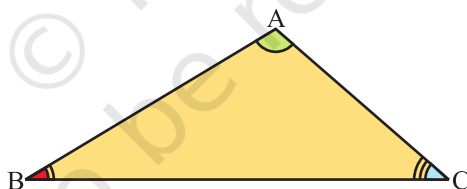


Fig. 1

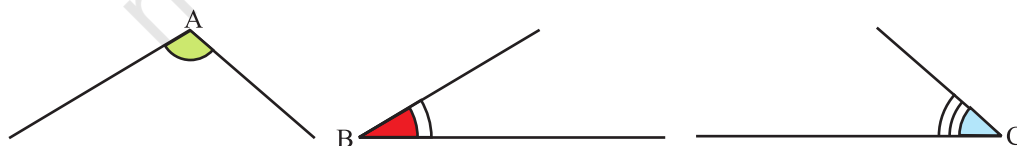


Fig. 2

5. Draw a line on the hardboard and arrange the cut-outs of three angles at a point O as shown in Fig. 3.

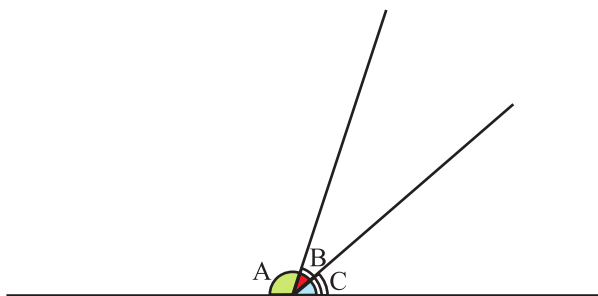


Fig. 3

DEMONSTRATION

The three cut-outs of the three angles A, B and C placed adjacent to each other at a point form a line forming a straight angle = 180° . It shows that sum of the three angles of a triangle is 180° . Therefore, $\angle A + \angle B + \angle C = 180^\circ$.

OBSERVATION

Measure of $\angle A$ =

Measure of $\angle B$ =

Measure of $\angle C$ =

Sum ($\angle A + \angle B + \angle C$) =

APPLICATION

This result may be used in a number of geometrical problems such as to find the sum of the angles of a quadrilateral, pentagon, etc.