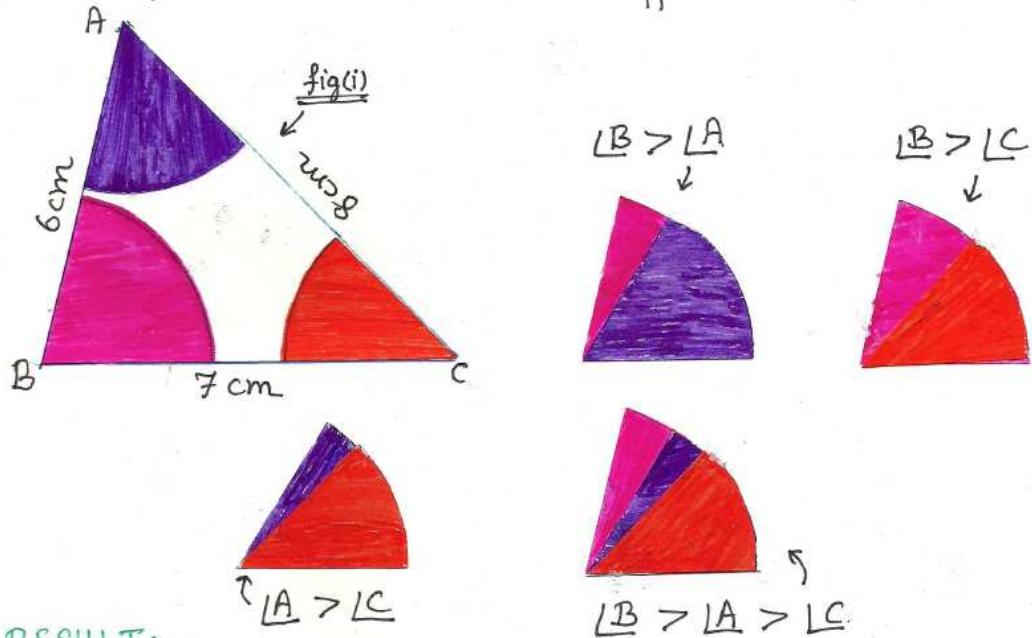


CLASS: IX. MATH ACTIVITY NO: 2. SIDES AND ANGLES OF A TRIANGLE

OBJECTIVE: To verify that if two sides of a triangle are unequal, the longer side has a greater angle opposite to it (by paper cutting and pasting method).

DESIGN AND OR APPROACH TO THE ACTIVITY: 1) Knowledge of the fact that only angles opposite to equal sides of a triangle are equal. 2) Comparison of angles' magnitude by paper cutting and pasting method.

PROCEDURE: 1) Draw any triangle ABC with unequal sides, say,  $AB = 6\text{cm}$ ,  $BC = 7\text{cm}$  and  $AC = 8\text{cm}$  as shown in fig(i). 2) With the help of a protractor, measure the three angles of  $\triangle ABC$ . 3) Make cut-outs of  $\angle A$ ,  $\angle B$  and  $\angle C$  in triplicate and colour them with different colours.



RESULT: On measuring, we find that  $\angle B = 75^\circ$ ,  $\angle C = 47^\circ$  and  $\angle A = 58^\circ$ . On comparing the measurements of the three angles, we find that  $\angle B > \angle A$ ,  $\angle B > \angle C$  and  $\angle A > \angle C$ .

- (i)  $AC > BC$  and  $\angle B > \angle A$
- (ii)  $AC > AB$  and  $\angle B > \angle C$
- (iii)  $BC > AB$  and  $\angle A > \angle C$ . Thus, we observe that the longer side has a greater angle opposite to it.

Since  $AC > BC > AB$ , we find that  $\angle B > \angle A > \angle C$ .

The same is observed by comparing the cut-outs of  $\angle A$ ,  $\angle B$  and  $\angle C$ . Hence Verified.