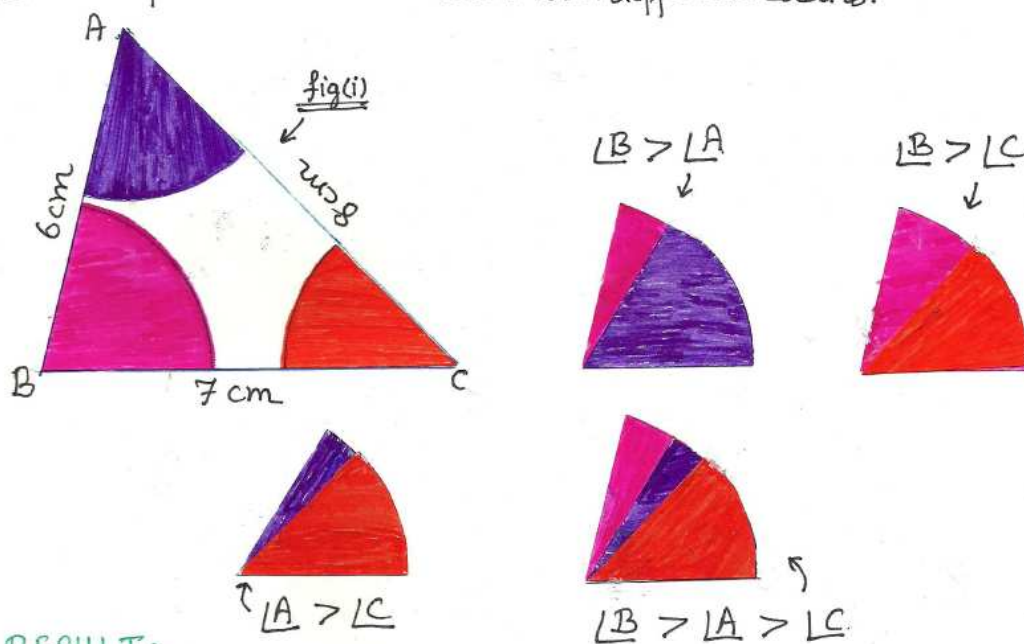


CLASS: IX. MATH ACTIVITY NO: 2. SIDES AND ANGLES OF A TRIANGLE

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.