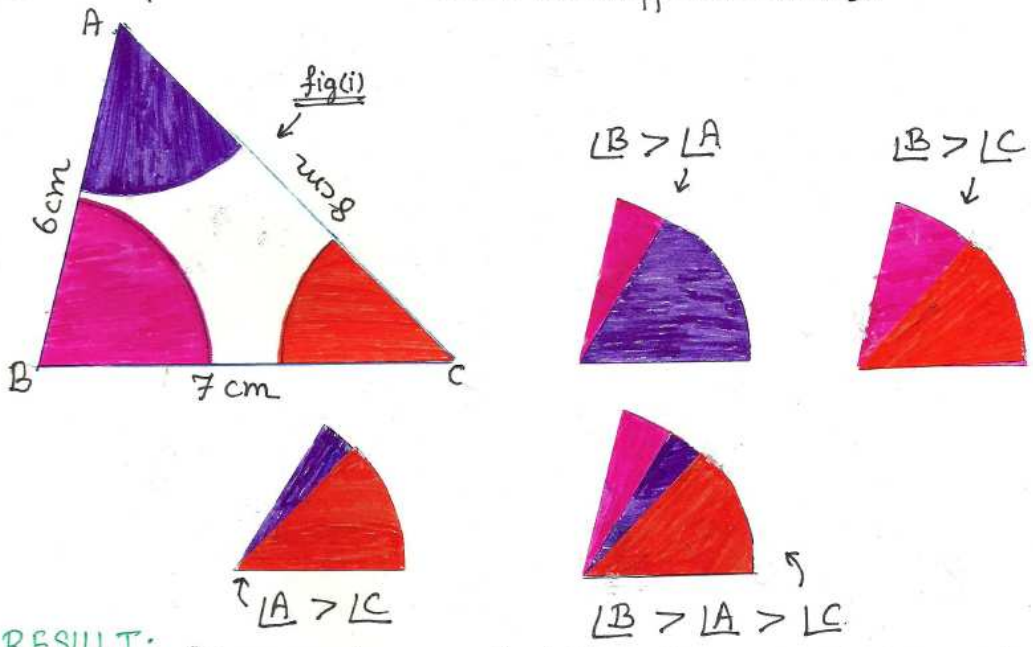
CLASS: IX. MATH ACTIVITY NO: 2. SIDES AND ANGLES OF A TRIANGLE

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 = 6cm, BC = 7cm and AC = 8cm 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 $\angle B = 75°$, $\angle C = 47°$ and $\angle A = 58°$. 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.