

ACTIVITY -9

TOPIC: CONGRUENCE OF TRIANGLES

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1. **What we have to do?**

To justify that two identical triangles are congruent by the activity method.

2. **What is required?**

Chart paper, a pair of scissors, geometry box, adhesive.

3. **How much time is required?**

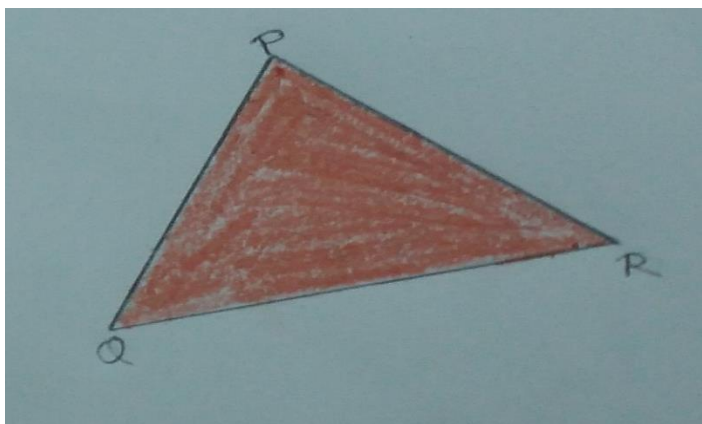
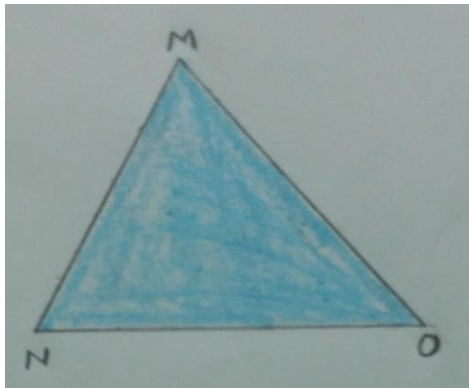
30 – 40 minutes

4. **What do you need to know?**

Sides, Angles, identical triangles and concept of congruent figures.

5. **How will you proceed?**

- a. Take a chart paper and draw two identical triangles ($\triangle MNO$ and $\triangle PQR$)



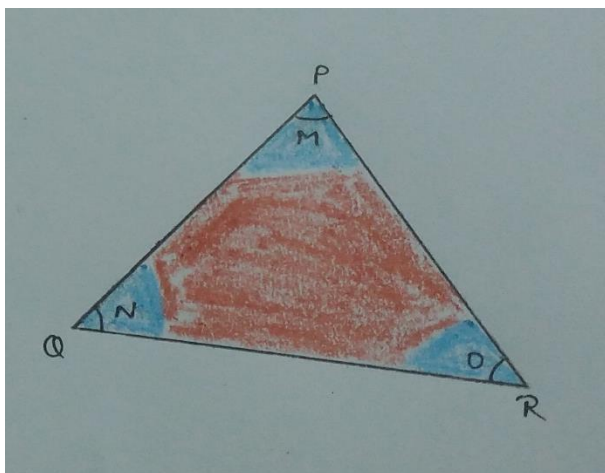
b. Measure the sides of the triangles:

- $MN = \text{-----}$ $PQ = \text{-----}$
- $NO = \text{-----}$ $QR = \text{-----}$
- $OM = \text{-----}$ $RP = \text{-----}$

c. Cut all the three angles $\angle M$, $\angle N$ and $\angle O$ of the triangle MNO.

d. Place $\angle M$ on $\angle P$, $\angle N$ on $\angle Q$, $\angle O$ on $\angle R$ of $\triangle PQR$.

e. $\angle M$, $\angle N$ and $\angle O$ completely fit into $\angle P$, $\angle Q$ and $\angle R$ as shown in figure below.



6. What have you observed?

- Write the three pairs of equal sides and equal angles.

7. What have you learnt?

8. Extended Activity

Answer the following:

- a) Two squares are always congruent. Is it true? Why or why not?
- b) Two circles of diameter 10 cm each are congruent. Is it true? Why or why not?

Real life Applications:

The above concept is used in our day-to-day life incidents viz. construction, architecture, making domes, sports, making pyramids etc....