Triangle Inequality

1. **Which of the following can be the sides of a triangle?**

   A. 1.8 cm, 3.5 cm, 6 cm

   B. 5 cm, 7 cm, 12 cm

   C. 3.4 cm, 2.1 cm, 5.3 cm

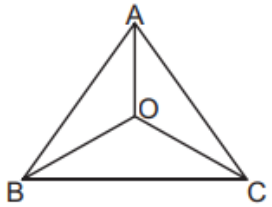
   D. 1 cm, 3 cm, 2 cm

2. **In the given figure, is**

   A. OA + OB > AB?

   B. OA + OC = AC?

   C. OB + OC < BC?



3. **In the given figure, D is a point on the side AC of ΔABC. Fill in the blanks with > or < = :**

   A. BD _____ AB + AD

   B. BC + CD _____ BD

   C. BD _____ $\frac{1}{2}$ (AB + BC + AC)

4. **In the given figure P and Q are the points on the side BC of ΔABC. Find AP = AQ. Prove that AC + AB + BC > 2AP + PQ.**