Bal Bharati
PUBLIC SCHOOL
RGPPL RATNAGIRI
ACADEMIC YEAR 2022-23
Worksheet No. 1
Subject:MATHEMATICS

**Grade: IX**   **CH-7-TRIANGLES**

1. Line segment joining the mid point of any side with the opposite vertex is
   (a) altitude   (b) median   c) perpendicular bisector   (d) angle bisector

2. The length of perpendicular drawn from the opposite vertex to any side is
   (a) altitude   (b) median   c) perpendicular bisector   (d) angle bisector

3. The point of intersection of all the altitudes of a triangle is
   (a) orthocentre   (b) incentre   c) circumcentre   (d) centroid

4. The point of intersection of the perpendicular bisector of all sides of a triangle is
   (a) orthocentre   (b) incentre   c) circumcentre   (d) centroid

5. In the figure if $\angle x = \angle y$ and AB = CB. Prove that AE = CD
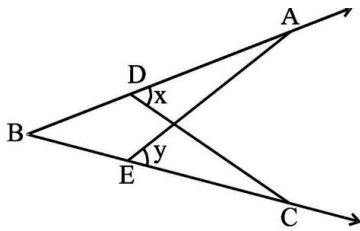
6. In the figure PQRS is a quadrilateral and T and U are respectively points on PS and RS

   such that PQ = RQ, $\angle PQT = \angle RQU$ and $\angle TQS = \angle UQS$. Prove that QT = QU.
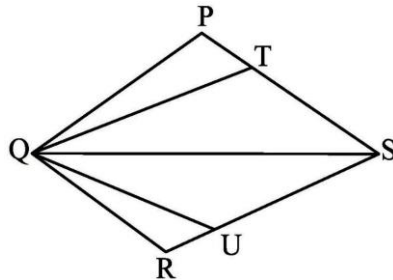
7. ABC is a triangle in which $\angle B = 2\angle C$. D is a point on BC such that AD bisects $\angle BAC$ and

   AB = CD. Prove that $\angle BAC = 72^0$.

8. AD is an altitude of an isosceles triangle ABC in which AB = AC. Show that

   (i) AD bisects BC

   (ii) AD bisects $\square$A