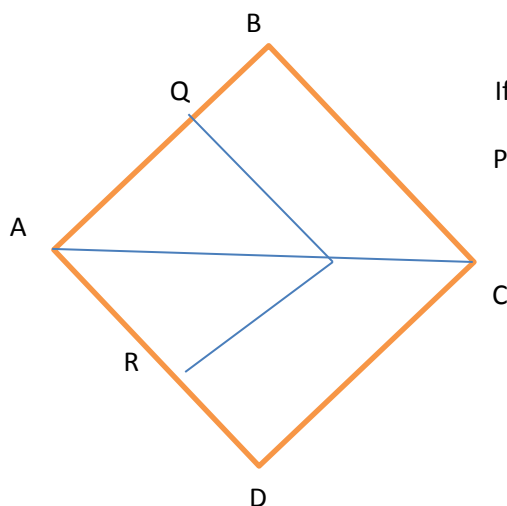


MATHEMATICS CLASS - X

ASSIGNMENT – TRIANGLES

1. Let X be any point on the side BC of a triangle ABC. If XM, XN are drawn parallel to BA and CA, BA in M and N respectively, MN meets BC produced in T.

2.

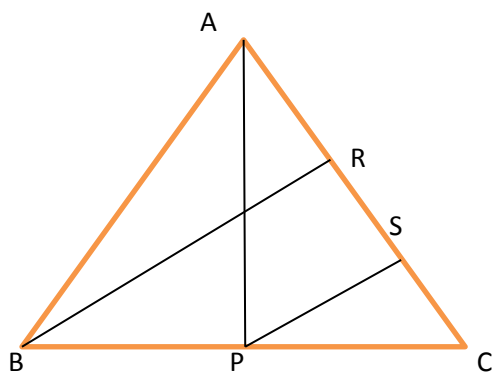


If $PQ \parallel BC$ and $PR \parallel CD$

Prove that $AR/AD = AQ/AB$

3. ABCD is a quadrilateral, P, Q, R and S are the points of trisection of sides AB, BC, CD and DA respectively and are adjacent to A and C; Prove that PQRS is a parallelogram.

4.



In the given figure, P is the mid point of BC and Q

is the mid point of AP. If BQ when produced meets AC at R.

Prove that $RA = \frac{1}{3} CA$

5. Through the mid point M of the side CD of a parallelogram ABCD, the line BM is drawn intersecting AC in L and AD produced in E. Prove that $EL = 2 BL$
6. Through the vertex D of a parallelogram ABCD, a line is drawn to intersect the sides BA and BC produced at E and F respectively. Prove that $DA/AE = FB/BE = FC/CD$.
7. ABC is a right triangle right angled at B. Let D and E be any points on AB and BC respectively. Prove that $AE^2 + CD^2 = AC^2 + DE^2$.