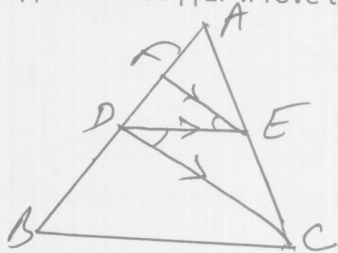


Class Xth Assignment

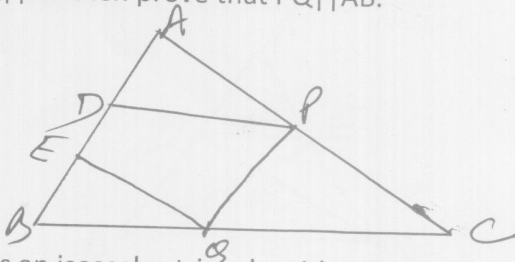
Chapter 6 Triangles

Q1. In fig $\triangle ABC$, $DE \parallel BC$ and $CD \parallel EF$. Prove that $AD^2 = AF \times AB$.



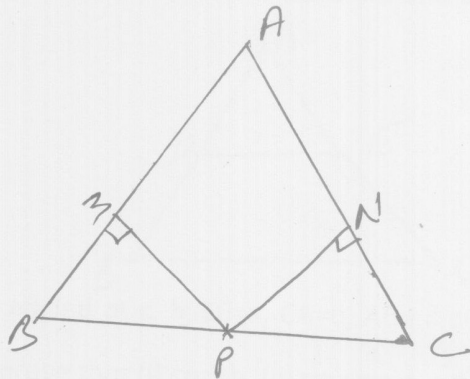
Q2. In the fig, there are two points D and E on side AB of $\triangle ABC$ such that $AD = BE$.

If $DP \parallel BC$ and $EQ \parallel AC$ then prove that $PQ \parallel AB$.



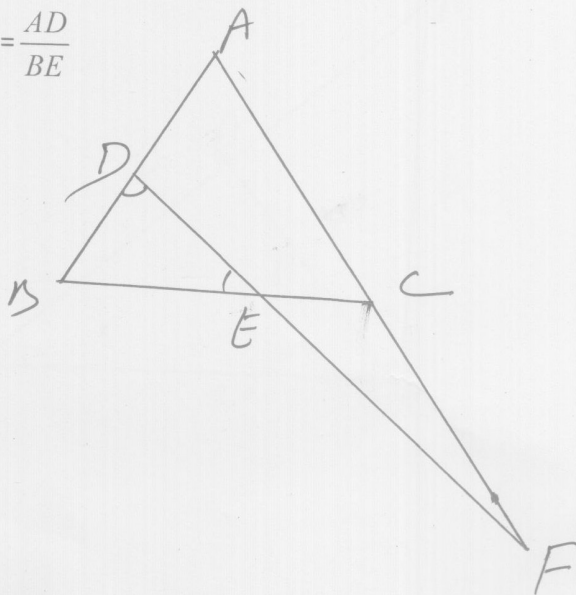
Q3. In fig, $\triangle ABC$ is an isosceles triangle with $AB = AC$. $PM \perp AB$ and $PN \perp AC$.

Prove that $\frac{BM}{CN} = \frac{MP}{NP}$



Q4. In the fig. $\angle BED = \angle BDE$ and E is middle points of BC.

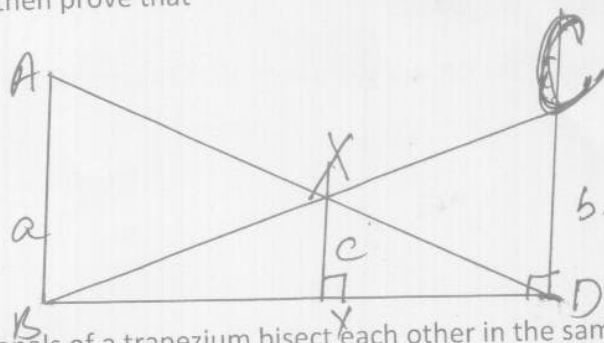
Prove that $\frac{AF}{CF} = \frac{AD}{BE}$



Q5. In the fig. $\angle ABD = \angle XYD = \angle CDB = 90^\circ$

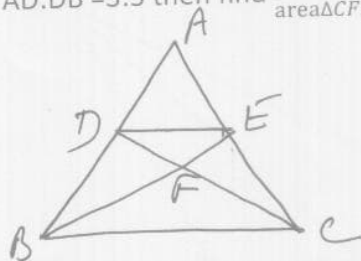
If $AB = a$, $XY = c$, $CD = b$ then prove that

$$C(a+b) = ab$$

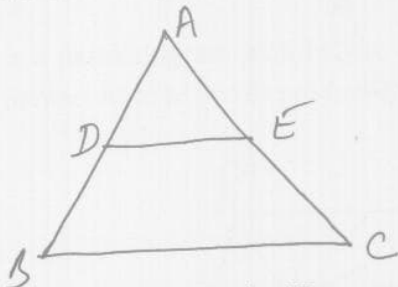


Q6. Prove that diagonals of a trapezium bisect each other in the same ratio

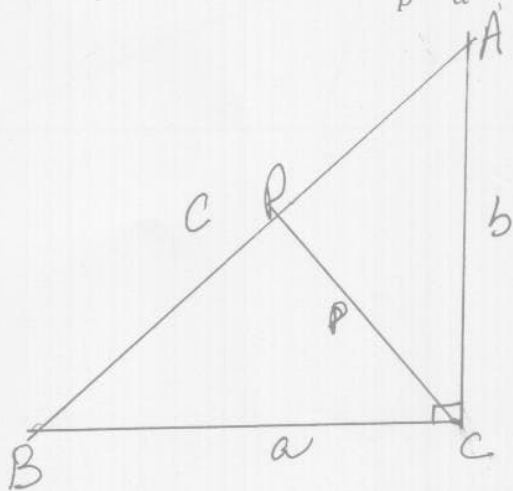
Q7. In $\triangle ABC$, $DE \parallel BC$. If $AD:DB = 3:5$ then find $\frac{\text{area} \triangle DFE}{\text{area} \triangle CFB}$



Q8. In the given fig. $DE \parallel BC$ if $DE = 5$ cm, $BC = 8$ cm and area of $\triangle ADE = 10$ cm² find the area of $\triangle ABC$.



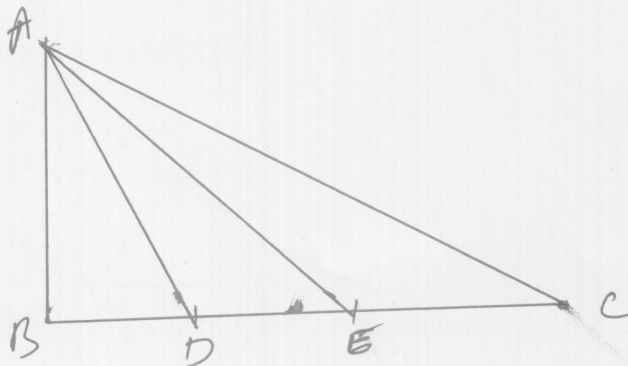
Q9. $\triangle ABC$ is a right angled at C . If $BC = a$, $CA = b$, $AB = c$ and p is length of perpendicular drawn from C on AB . then prove that (i) $cp = ab$. (ii) $\frac{1}{p^2} = \frac{1}{a^2} + \frac{1}{b^2}$



Q10. In $\triangle ABC$, AD is median and $AM \perp BC$ then prove that $AB^2 + AC^2 = 2AD^2 + \frac{1}{2} BC^2$

Q11. In rt. $\angle B$ if D and E trisect BC then prove that

$$8AE^2 = 3AC^2 + 5AD^2$$



Q12. In the given fig. PQRS is a parallelogram with $PQ = 16$ cm, $QR = 10$ cm. L is a point on PR such that $RL:LP = 2:3$. QL is produced to meet RS at M and PS produced at N . Find the length of PN and RM

