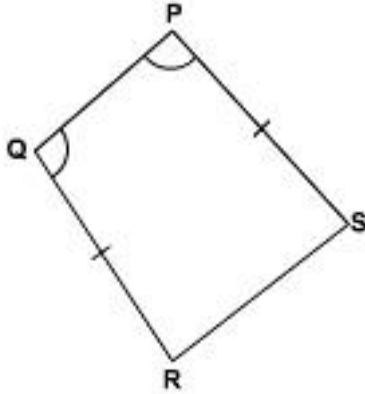
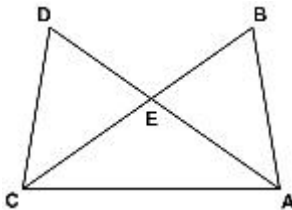


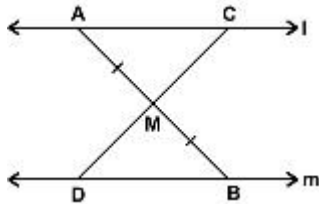
- Q1.** In the given figure, $PS=QR$ and $\angle SPQ = \angle RQP$. Prove that $PR=QS$ and $\angle QPR = \angle PQS$.



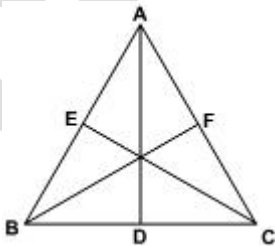
- Q2.** In the given figure, $AB = CD$ and $AD = BC$. Prove that $\triangle ADC \cong \triangle CBA$.



- Q3.** In the given figure, $l \parallel m$ and M is the mid-point of AB . Prove that M is also the mid-point of CD having its end points at l and m .

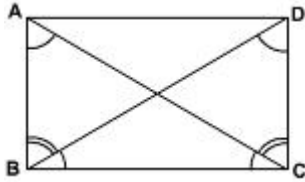


- Q4.** AD, BE and CF are the medians of an equilateral $\triangle ABC$. Prove that $AD = BE = CF$.

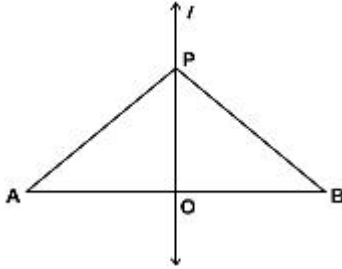


- Q6.** In the given figure, $\angle BCD = \angle ADC$, $\angle ACB = \angle BDA$. Prove that $AD = BC$
 And $\angle A = \angle B$

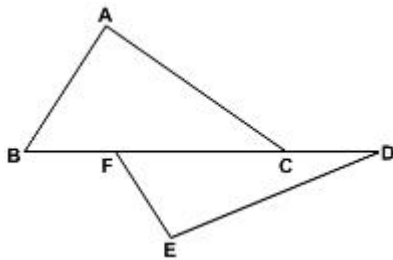
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Q7. AB is a line segment and a line l is its perpendicular bisector. If a point P lies on l , show that P is equidistant from A and B



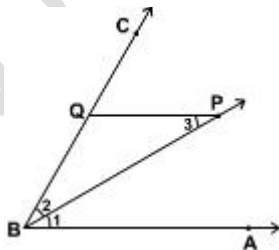
Q8. In the given figure, $BA = AC$ and $DE = EF$ such that $BA = DE$ and $BF = DC$. Prove that $AC = EF$.



Q9. In $\triangle ABC$, if $AB = AC$ and $\angle A = 70^\circ$ find $\angle B$ and $\angle C$.

Q10. The vertical angle of an isosceles triangle is 80° . Find its base angles.

Q11. P is a point on the bisector of $\angle ABC$. If the line through P parallel to AB meets BC at Q , prove that the triangle BPQ is isosceles.

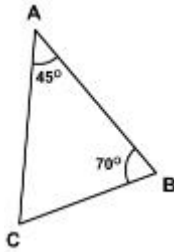


Complete the following statements:

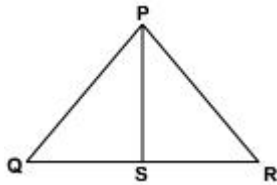
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- Q12.** (i) Angles opposite to equal sides of a triangle are
(ii) If the altitude from one vertex of a triangle bisects the opposite side, then the triangle is
(iii) In a triangle, angle opposite to the longer side is
(iv) Sum of any two sides of a triangle is ... than the third side.

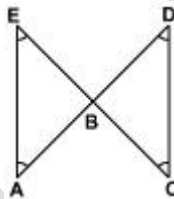
- Q13.** In triangle ABC, if $\angle A = 45^\circ$ and $\angle B = 70^\circ$. Determine the shortest and the longest sides of the triangle.



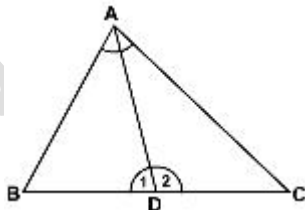
- Q14.** In triangle PQR, S is any point on the side QR. Prove that $PQ + QR + RP > 2PS$.



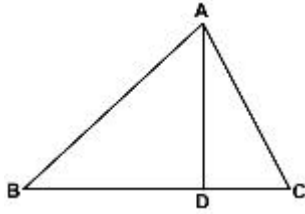
- Q15.** In the figure, $\angle E > \angle A$ and $\angle C > \angle D$. Prove that $AD > EC$.



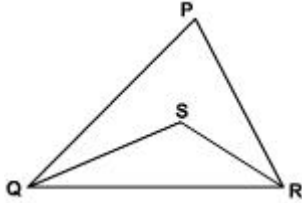
- Q16.** In triangle ABC, AD is the bisector of $\angle BAC$ and point D lies on BC. Prove that $AB > BD$ and $AC > CD$.



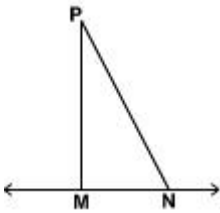
- Q17.** In triangle ABC, $AB > AC$ and D is a point on BC. Prove that $AB > AD$.



- Q18.** In the given figure, $PQ > PR$. QS and RS are the bisectors of $\angle Q$ and $\angle R$ respectively. Prove that $SQ > SR$.



- Q19.** Prove that of all the line segments that can be drawn to a given line from a point, not on the line, the perpendicular line segment is the shortest.



- Q20.** Is it possible to draw a triangle with sides of length 2cm; 3cm and 7cm? Give reason.