



MATHS

BOOKS - JEEVITH PUBLICATIONS

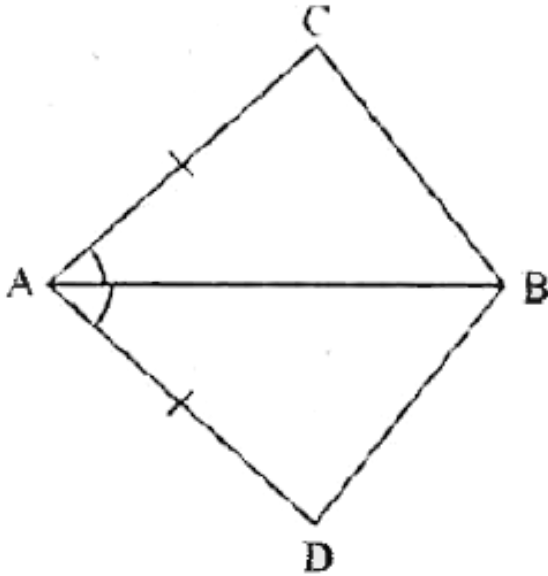
MATHS (KANNADA ENGLISH)

TRIANGLES

Exercise 5 1

1. $AC = AD$ and AB bisects A . show that $\triangle ABC \cong \triangle ABD$. What can you say about

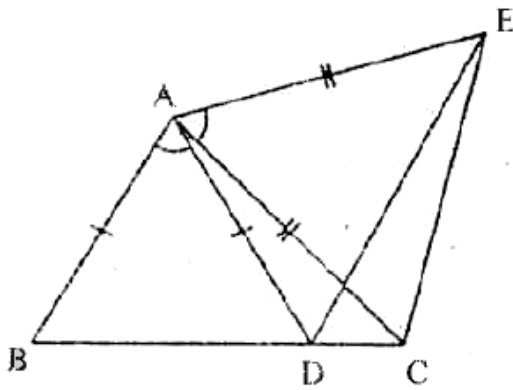
BC and BD?



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2. In the figure, $AC = AE$, $AB = AD$ and $\angle BAD = \angle EAC$.

Show that $BC = DE$

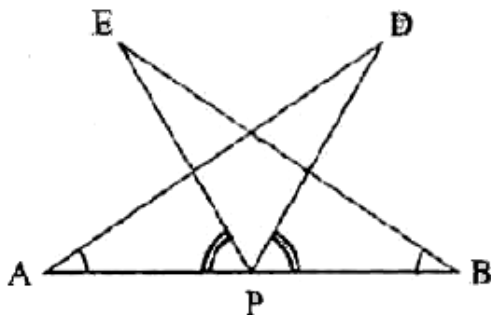


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3. AB is line segment and P is its mid point. D and E are points on the same side of AB such that $\angle BAD = \angle ABE$ and $\angle EPA = \angle DPB$ show that

(i) $\triangle DAP \cong \triangle EBP$

(ii) $AD = BE$

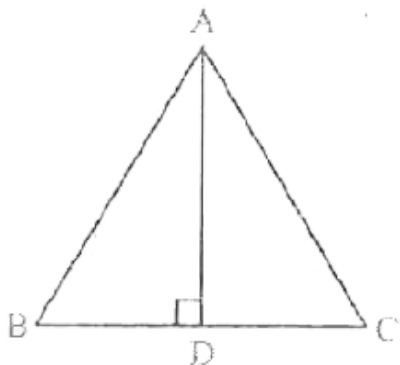


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Exercise 5 2

1. In $\triangle ABC$, AD is the perpendicular bisector of BC. Show that $\triangle ABC$ is an isosceles triangle

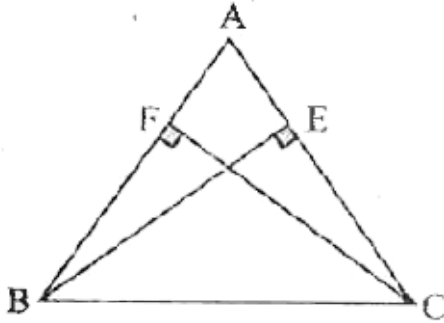
in which $AB = AC$.



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2. ABC is an isosceles triangle in which altitudes BE and CF are drawn to equal sides AC and AB respectively. Show that these

altitudes are equal.

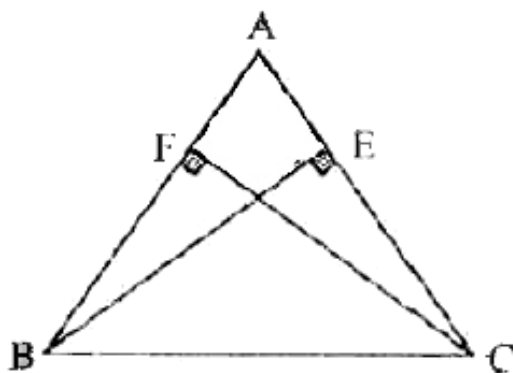


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3. ABC is a triangle in which altitude BE and CF to sides AC and AB are equal. Show that

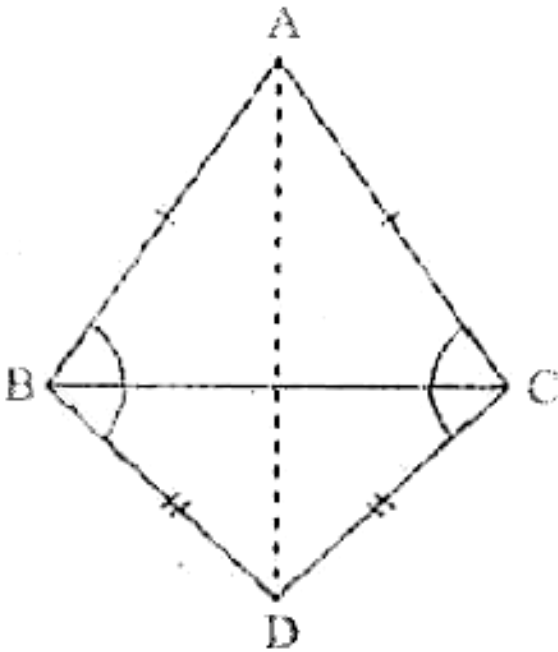
$$\triangle ABE \cong \triangle ACF$$

(ii) $AB = AC$, i.e., ABC is an isosceles triangle.



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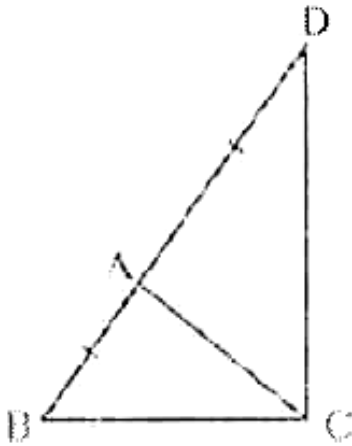
4. ABC and DBC are two isosceles triangles on the same base BC . Show that $ABD = ACD$.



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5. $\triangle ABC$ is an isosceles triangle in which $AB = AC$. Side BA is produced to D such that $AD = AB$.

Show that $\angle BCD$ is a right angle.

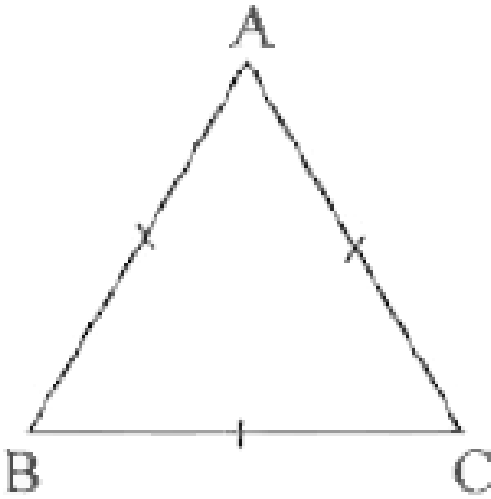


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6. $\triangle ABC$ is right angled triangle in which $\angle A = 90^\circ$ and $AB = AC$. Find $\angle B$ and $\angle C$.

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7. Show that the angles of an equilateral triangle are 60° each



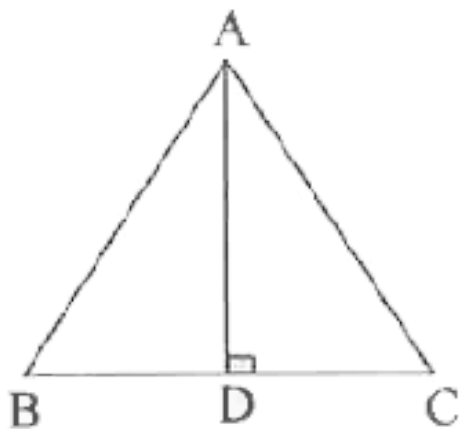
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Exercise 5 3

1. AD is an altitude of an isosceles triangle ABC

in which $AB = AC$. Show that

(i) AD bisects BC (ii) AD bisects $\angle A$.

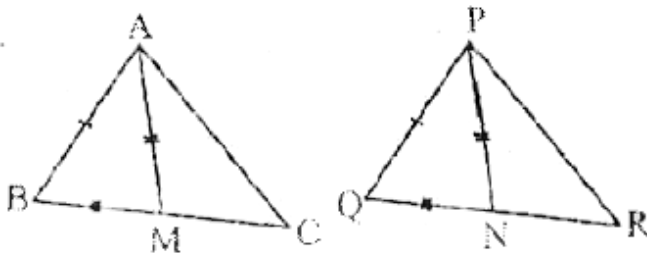


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2. Two sides AB and BC and median AM of one triangle ABC are respectively equal to sides PQ and QR and median PN of $\triangle PQR$. Show that

$$\triangle ABM \cong \triangle PQN$$

(ii) $\triangle ABC \cong \triangle PQR$



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3. BE and CF are two equal altitudes of a triangle ABC. Using RHS congruence rule, prove that the triangle ABC is isoscles.



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4. ABC is an isosceles triangle with $AB = AC$. Draw $AP \perp BC$ to show that $A = B$.



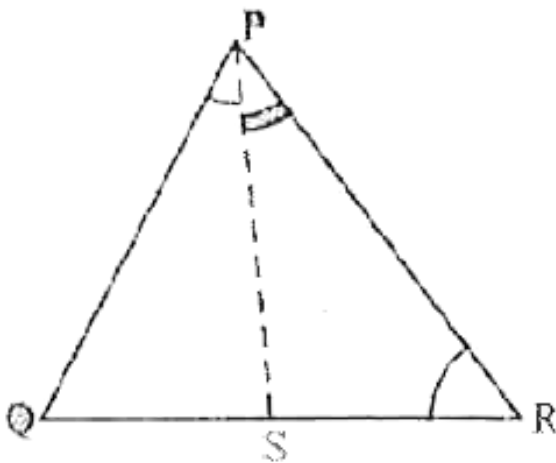
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1. Show that in a right angled triangle, the hypotenuse is the longest side.



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2. In $\triangle PQR$, $PQ > PR$ and PS bisects $\angle QPR$. Prove that $\angle PSR > \angle PSQ$



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3. Show that of all line segments drawn from a given point not on it, the perpendicular line segment is the shortest.

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Exercise 5 5

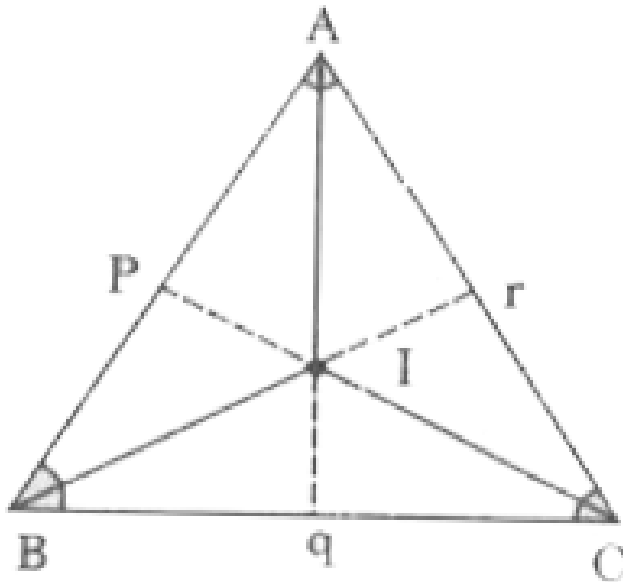
1. ABC is triangle. Locate a point in the interior of $\triangle ABC$ which is equidistant from all the vertices of $\triangle ABC$.



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2. In a triangle, locate a point in its interior of which is equidistant from all the sides of

triangle.

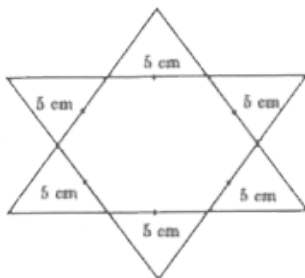
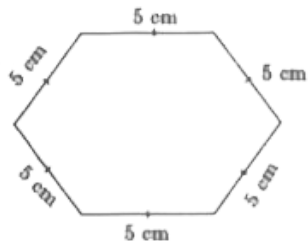


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3. Complete the hexagonal and star shaped Rangolies, By filling them with as many equilateral triangles of side 1 cm as you can.

Count the number of triangles in each case.

Which has more triangles.



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Exercise 5 7

1. Construct a triangle PQR in which $QR = 6$ cm,

$Q = 60^\circ$ and $PR = PQ = 2$ cm.



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