



MATHS

BOOKS - MAXIMUM PUBLICATION

SIMILAR TRIANGLES

Example

1. The perpendicular from the square corners of a right angle triangle cuts the opposite side into two parts of 2 and 3 cm length. Prove that

two small triangles cut by the perpendicular have the same angles.



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2. The perpendicular from the square corners of a right angle triangle cuts the opposite side into two parts of 2 and 3 cm length. Taking the length of the perpendicular as h , prove that

$$\frac{h}{2} = \frac{3}{h}$$



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3. The perpendicular from the square corners of a right angle triangle cuts the opposite side into two parts of 2 and 3 cm length. Calculate the perpendicular sides of the large triangle.



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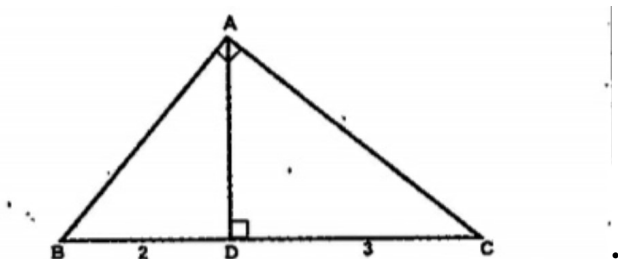
4. The perpendicular from the square comers of a right triangle cuts the opposite side into two parts of 2 and 3 cm length.

Prove that if the perpendicular from the square corner of the right triangle divides the

opposite sides into parts of length a and b and

if the length of the perpendicular is h , then

$$h^2 = ab$$



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5. At two ends of a horizontal line, angles of equal size are drawn, and two points on the slanted lines are joined. Prove that the parts

of the horizontal line and parts of slanted lines are in the same ratio.



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6. At two ends of a horizontal line, angles of equal size are drawn, and two points on the slanted lines are joined. Prove that the two slanted lines at the ends of the horizontal line are in the same ratio



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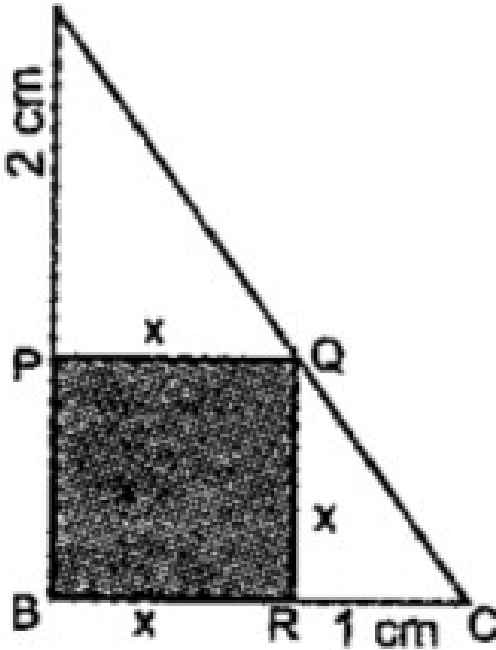
7. At two ends of a horizontal line, angles of equal size are drawn, and two points on the slanted lines are joined. Explain how a line of length 6 cm can be divided in the ratio 3:4



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8. The picture shows a square drawn sharing one corner with a right triangle and the other three corners on the sides of this triangle.

Calculate the length of a side of the square.

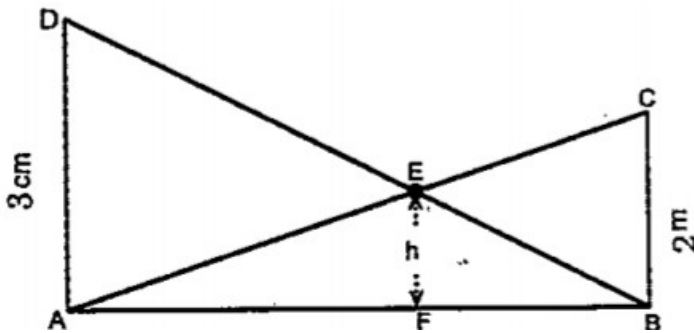


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9. Two poles of height 3 m and 2m are erected upright on the ground and ropes are

stretched from the top of each to the foot of the tower.

At what height above the ground do the ropes cross each other.

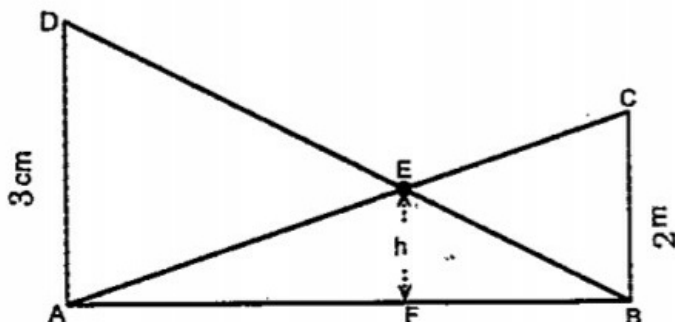


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10. Two poles are erected upright on the ground and ropes are stretched from the top

of each to the foot of the tower.

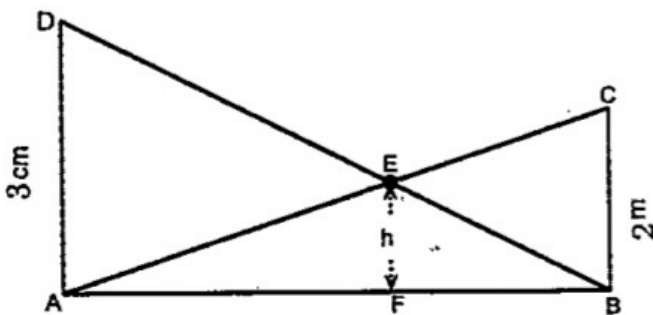
Taking the heights of the poles as 'a' and 'b' and height above the ground of the point where the ropes cross each other as h, find the relation between a,b and h.



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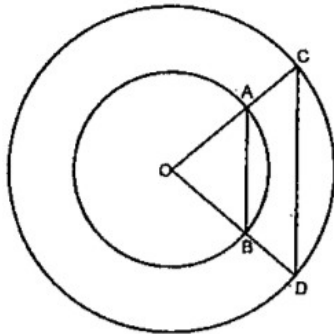
11. Two poles of height 3 m and 2m are erected upright on the ground and ropes are stretched from the top of each to the foot of the tower.

Prove that this height would be the same whatever be the distance between the poles.



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12. The picture shows two circles with the same centre and two triangles formed by joining the centre to the points of intersection of the circles with two radii of the larger circle. prove that these triangles are similar



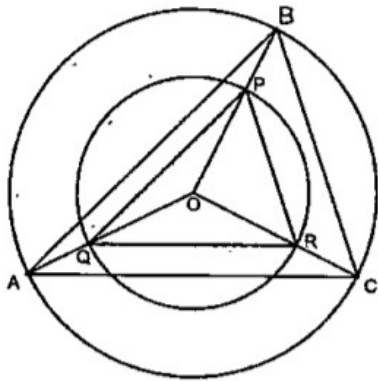
Prove that these triangles are similar.



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13. The lines joining the circumcentre of a triangle to the vertices are extended to meet another circle with the same centre, and these points are joined to make another triangle.

Prove that the two triangles are similar.



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