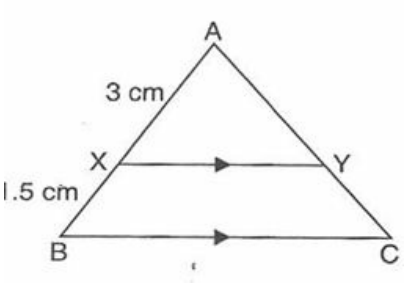
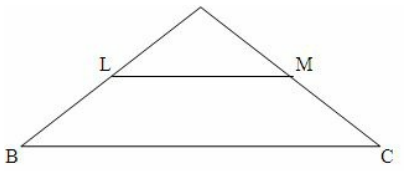
CBSE Test Paper 01

Chapter 6 Triangles

1. In an isosceles triangle ABC if AC = BC and $AB^2 = 2AC^2$ then the measure of $\angle C$ is **(1)**
   a. 90^o
   b. 45^o
   c. 60^o
   d. 30^0
2. In the given figure XY || BC. If AX = 3cm, XB = 1.5cm and BC = 6cm, then XY is equal to **(1)**



   a. 6 cm.
   b. 4.5 cm
   c. 3 cm.
   d. 4 cm.
3. What will be the length of the hypotenuse of an isosceles right triangle whose one side is $4\sqrt{2}\ cm$ **(1)**
   a. $12\sqrt{2}\ cm.$
   b. 12 cm.
   c. 8 cm.
   d. $8\sqrt{2}cm.$
4. In the given figure, if $\frac{ar(\Delta ALM)}{ar(trapezium\ LMCB)} = \frac{9}{16}$, and LM||BC, Then AL:LB is equal to **(1)**



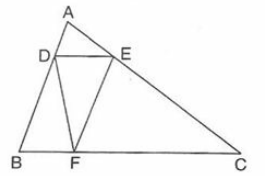
   a. 3 : 5

b. 4 : 1

c. 3 : 4

d. 2 : 3

5. In the follwoing figure AD : DB = 1 : 3, AE : EC = 1 : 3 and BF : FC = 1 : 4, then **(1)**



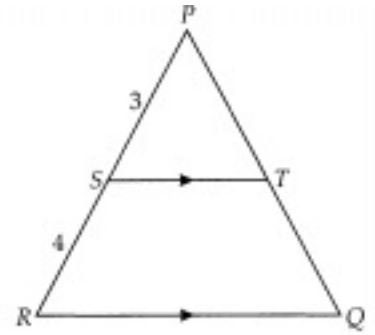
a. $AD||FC.$

b. $AD||FE.$

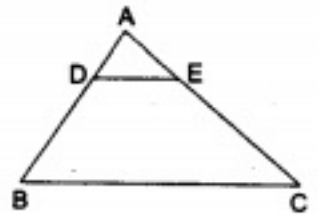
c. $DE||BC.$

d. $AE||DF.$

6. In the given figure, ST || RQ, PS = 3 cm and SR = 4 cm. Find the ratio of the area of $\triangle$PST to the area of $\triangle$PRQ. **(1)**



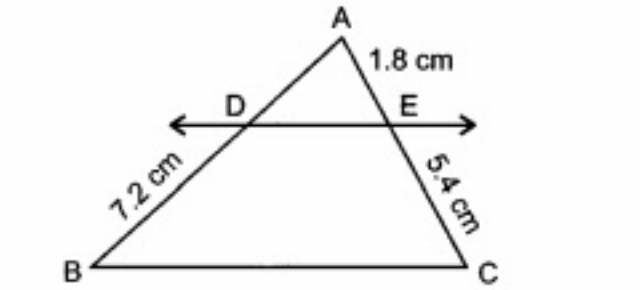
7. If D and E are points on the sides AB and AC respectively of $\triangle ABC$ such that AB = 5.6 cm, AD = 1.4 cm, AC = 7.2 cm and AE = 1.8 cm, show that DE ||BC. **(1)**



8. A ladder is placed in such a way that its foot is at a distance of 5 m from a wall and its tip reaches a window 12 m above the ground. Determine the length of the ladder. **(1)**

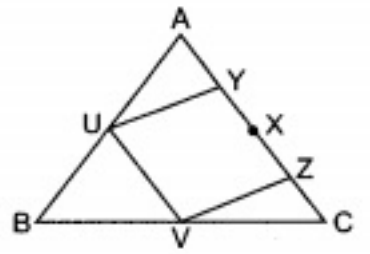
9. Triangles ABC and DEF are similar. If AC = 19 cm and DF = 8 cm, find the ratio of the area of two triangles. **(1)**

10. In the given figure, DE || BC.



Find AD. **(1)**

11. In $\triangle$ABC, X is any point on AC. If Y, Z, U and V are the middle points on AX, XC, AB and BC respectively, then prove that UY || VZ and UV || YZ.

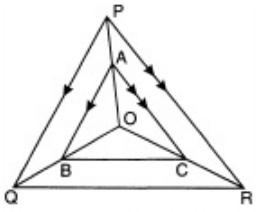


12. If the angles of one triangle are respectively equal to the angles of another triangle, Prove that the ratio of their corresponding sides is the same as the ratio of their corresponding angle bisectors. **(2)**

13. In a ΔABC, D and E are points on the sides AB and AC respectively such that DE || BC. If AD = x, DB = x-2, AE = x + 2 and EC = x - 1, find the value of x. **(2)**

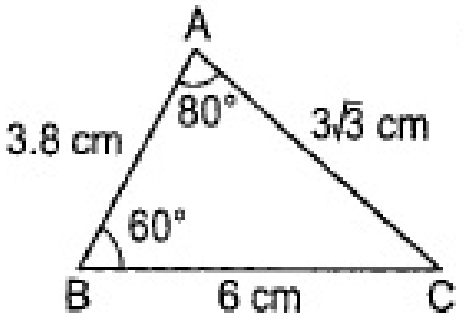
14. A man goes 10m due south and then 24m due west. How far is he from the starting point? **(3)**

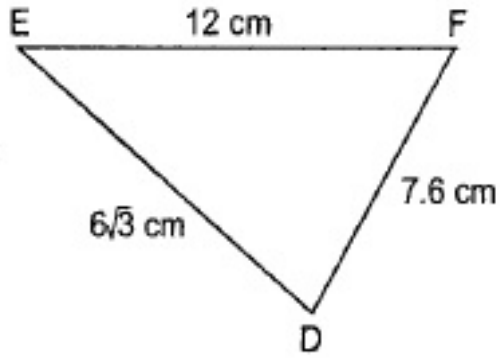
15. In the given figure A, B and C are points on OP, OQ and OR respectively such that AB $\|$ PQ and AC $\|$ PR. Prove that BC $\|$ QR.



16. In a ΔABC, D and E are points on the sides AB and AC respectively such that $DE \| BC$. If AD = 8x - 7, DB = 5x - 3, AE = 4x - 3 and EC = (3x -1), find the value of x. **(3)**

17. In Fig. find $\angle$F. **(3)**





18. Prove that ratio of the areas of two similar triangles is equal to the square of the ratio of their corresponding sides. **(4)**

19. In a trapezium ABCD, AB | | DC and DC = 2AB. EF | | AB, where E and F lie on BC and AD respectively such that $\frac{BE}{EC} = \frac{4}{3}$. Diagonal DB intersects EF at G. Prove that, 7EF = 11AB. **(4)**

20. In a triangle, if the square of one side is equal to the sum of the squares on the other two sides. Prove that the angle opposite to the first side is a right angle. Use the above theorem to find the measure of $\angle$ PKR in the figure given below. **(4)**