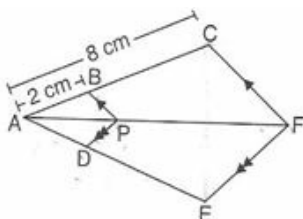


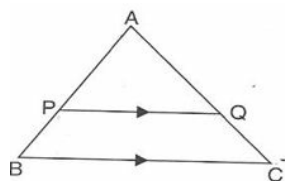
CBSE Test Paper 02

Chapter 6 Triangles

1. In the given figure if $BP \parallel CF$, $DP \parallel EF$, then AD: DE is equal to **(1)**



- a. 1 : 3.
 b. 3 : 4.
 c. 2 : 3.
 d. 1 : 4.
2. In the given figure $PQ \parallel BC$. $\frac{AP}{PB} = 4$, then the value of $\frac{AQ}{AC}$ is **(1)**



- a. 5
 b. $\frac{4}{5}$
 c. 4
 d. $\frac{5}{4}$
3. If $\triangle ABC \sim \triangle PQR$ such that $AB = 9.1$ cm and $PQ = 6.5$ cm. If the perimeter of $\triangle PQR$ is 25 cm, then the perimeter of $\triangle ABC$ is **(1)**
- a. 34 cm
 b. 35 cm
 c. 36 cm
 d. 30 cm
4. Out of the given statements **(1)**
- The areas of two similar triangles are in the ratio of the corresponding altitudes.
 - If the areas of two similar triangles are equal, then the triangles are congruent.
 - The ratio of areas of two similar triangles is equal to the ratio of their corresponding medians.
 - The ratio of the areas of two similar triangles is equal to the ratio of their

corresponding sides.

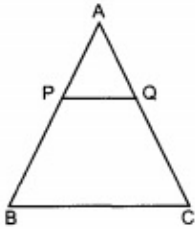
The correct statement is

- a. (iii)
- b. (ii)
- c. (i)
- d. (iv)

5. If in two triangles ABC and DEF, $\frac{AB}{DE} = \frac{BC}{FE} = \frac{CA}{FD}$, then **(1)**

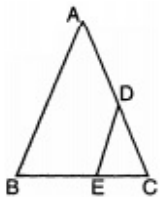
- a. $\triangle FDE \sim \triangle ABC$.
- b. $\triangle BCA \sim \triangle FDE$.
- c. $\triangle FDE \sim \triangle CAB$.
- d. $\triangle CBA \sim \triangle FDE$.

6. In the fig PQ \parallel BC and AP: PB = 1:2. Find $\frac{\text{ar}(\triangle APQ)}{\text{ar}(\triangle ABC)}$. **(1)**



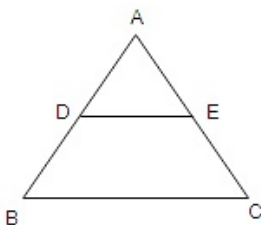
7. If the altitude of two similar triangles are in the ratio 2 : 3, what is the ratio of their areas? **(1)**

8. In the figure of $\triangle ABC$, the points D and E are on the sides CA, CB respectively such that DE \parallel AB, AD = 2x, DC = x + 3, BE = 2x - 1 and CE = x. Then, find x. **(1)**



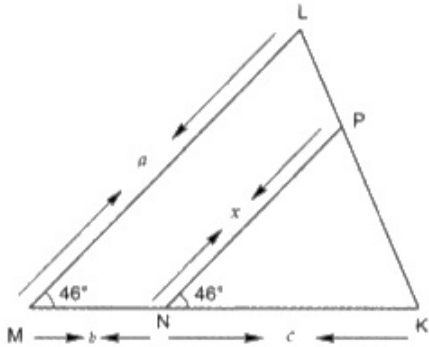
9. In $\triangle ABC$ shown below, DE \parallel BC

If BC = 8 cm, DE = 6 cm and area of $\triangle ADE = 45\text{cm}^2$, What is the area of $\triangle ABC$? **(1)**

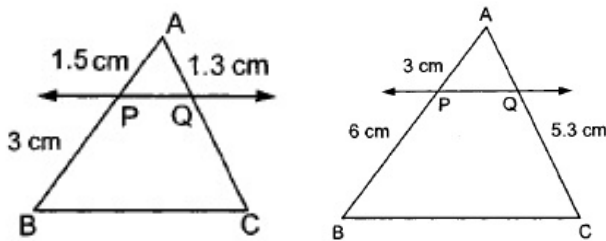


10. In $\triangle ABC$, if X and Y are points on AB and AC respectively such that $\frac{AX}{XB} = \frac{3}{4}$, $AY = 5$ and $YC = 9$, then state whether XY and BC are parallel or not. **(1)**

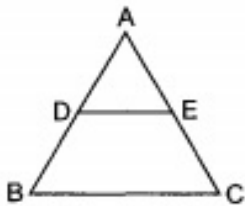
11. In Fig. $\angle M = \angle N = 46^\circ$. Express x in terms of a, b and c where a, b, c are lengths of LM, MN and NK respectively. **(2)**



12. In Fig. (i) and (ii), $PQ \parallel BC$. Find QC in (i) and AQ in (ii). **(2)**

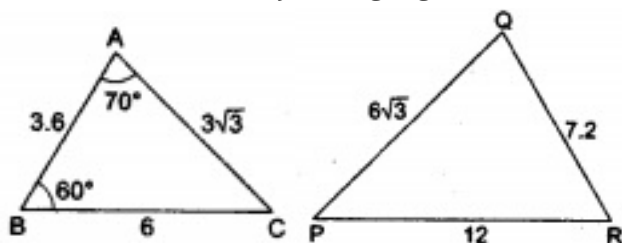


13. In figure, D and E are points on AB and AC respectively, such that $DE \parallel BC$. If $AD = \frac{1}{3} BD$, $AE = 4.5$ cm, find AC. **(2)**



14. In $\triangle ABC$, $DE \parallel BC$ If $AD = x + 2$, $DB = 3x + 16$, $AE = x$ and $EC = 3x + 5$, then find x. **(3)**

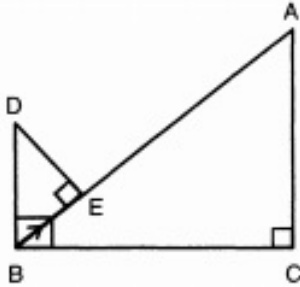
15. Find $\angle P$ in the adjoining figure. **(3)**



16. In three line segments OA, OB, and OC, points L, M, N respectively are so chosen that

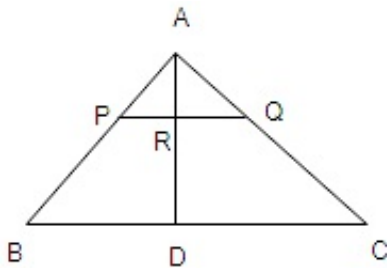
$LM \parallel AB$ and $MN \parallel BC$ but neither of L, M, N nor of A, B, C are collinear. Show that $LN \parallel AC$. (3)

17. In the given figure, $DB \perp BC$, $DE \perp AB$ and $AC \perp BC$. Prove that $\frac{BE}{DE} = \frac{AC}{BC}$ (3)



18. For going to a city B from city A, there is a route via city C such that $AC \perp CB$, $AC = 2x$ km and $CB = 2(x + 7)$ km. It is proposed to construct a 26 km highway which directly connects the two cities A and B. Find how much distance will be saved in reaching city B from city A after the construction of the highway. (4)

19. In the given figure, $AP = 3$ cm, $AR = 4.5$ cm, $AQ = 6$ cm, $AB = 5$ cm and $AC = 10$ cm, then find AD and the ratio of areas of $\triangle ARQ$ and $\triangle ADC$. (4)



20. In Fig. if $EF \parallel DC \parallel AB$. prove that $\frac{AE}{ED} = \frac{BF}{FC}$. (4)

