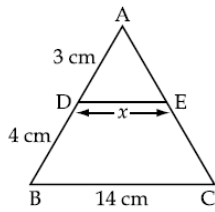




1. It is given that  $\triangle ABC \sim \triangle PQR$  with  $\frac{BC}{QR} = \frac{1}{3}$ , then  $\frac{ar(\triangle ABC)}{ar(\triangle PQR)}$  is  
(a) 9 (b) 3 (c)  $\frac{1}{3}$  (d)  $\frac{1}{9}$
2. If  $\triangle ABC \sim \triangle PQR$ , area of  $\triangle ABC = 81\text{cm}^2$ , area of  $\triangle PQR = 144\text{cm}^2$  and  $QR = 6$  cm, then length of  $BC$  is  
(a) 4 cm (b) 4.5 cm (c) 9 cm (d) 12 cm
3. A girl walks 200 towards East and she walks 150m towards North. The distance of the girl from the starting point is  
(a) 350m (b) 250m (c) 300m (d) 225m
4.  $ABC$  and  $BDE$  are two equilateral triangles such that  $BD = \frac{2}{3}BC$ . The ratio of the areas of triangles  $ABC$  and  $BDE$  are  
(a) 2 : 3 (b) 3 : 2 (c) 4 : 9 (d) 9 : 4
5. If  $DE \parallel BC$ , find the value of 'x'



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6. In a trapezium  $ABCD$ ,  $AB \parallel DC$ . Its diagonals  $AC$  and  $BD$  intersect at  $O$ .  
Show that  $\frac{OA}{OC} = \frac{OB}{OD}$
7. If a line is drawn parallel to one side of a triangle to intersect the other sides in distinct points, then prove that the line drawn, divides the two sides in the same ratio
8.  $P$  and  $Q$  are points on sides  $AB$  and  $AC$  respectively of  $\triangle ABC$ . If  $AP = 3$  cm,  $PB = 6$  cm,  $AQ = 5$  cm and  $QC = 10$  cm, show that  $BC = 3PQ$ .
9. In  $\triangle ABC$ ,  $AD \perp BC$  such that  $AB^2 = BD \cdot CD$ . Prove that  $ABC$  is right angled triangle, right angle at  $A$ .
10. Two right triangles  $ABC$  and  $DBC$  are drawn on the same hypotenuse  $BC$  and on the same side of  $BC$ . If  $AC$  and  $BD$  intersect at  $P$ , prove that  
 $AP \times PC = BP \times PD$

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