VIVEK TUTORIALS

X (English)

(Chapter One)

Mathematics Part - II-(Chapter One)

DATE: 20-02-19

TIME: 1 Hr

MARKS: 30

SEAT NO:

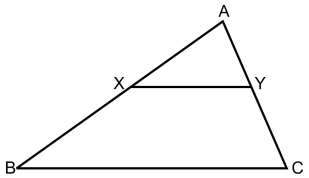
Q.1 Multiple Choice Questions 2

1 $\triangle ABC \sim \triangle PQR$. If A ($\triangle ABC$) = 25, ($\triangle PQR$) = 16, find AB : PQ.

a. 25 : 16 b. 4 : 5 c. 16 : 25 d. 5 : 4

2 In figure, seg XY || seg BC, then which of the following statements is true?

a. $\frac{AB}{AC}=\frac{AX}{AY}$ b. $\frac{AX}{XB}=\frac{AY}{AC}$ c. $\frac{AX}{YC}=\frac{AY}{XB}$ d. $\frac{AB}{YC}=\frac{AC}{XB}$

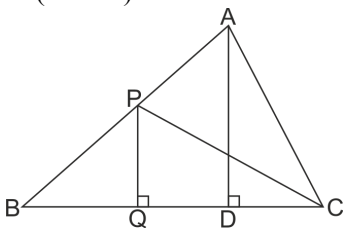


Q.2 Solve the following 4

1 In the adjoining figure, PQ ⊥ BC, AD ⊥ BC, PQ = 4, AD = 6.

Write down the following ratios.

$\frac{A(\triangle PQB)}{A(\triangle ADB)}$

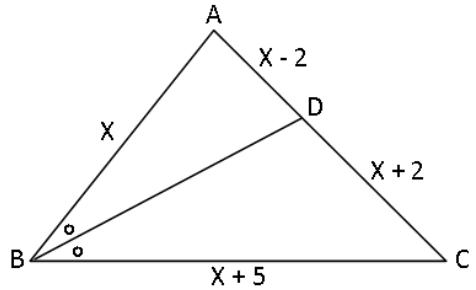


2 In trapezium ABCD, side AB || side CD, diagonal AC and BD intersect each other at point P. Then prove that

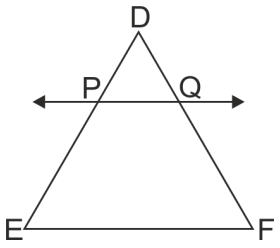
$\frac{A(\triangle ABP)}{A(\triangle CPD)}=\frac{AB^2}{CD^2}$

Q.3 Answer the following 4

1 In $\triangle$ ABC, seg BD bisects $\angle$ ABC. If AB = x, BC = x + 5, AD = x – 2, DC = x + 2, then find the value of x.



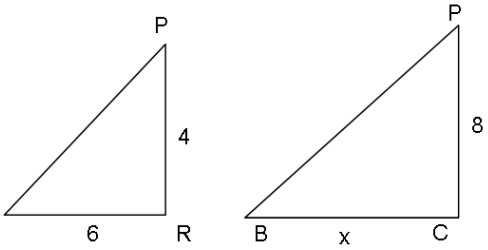
2 In $\triangle$DEF, line PQ || side EF, if DP = 2.4, PE = 7.2, DQ = 1.8 then find QF.



Q.4 Solve the following 6

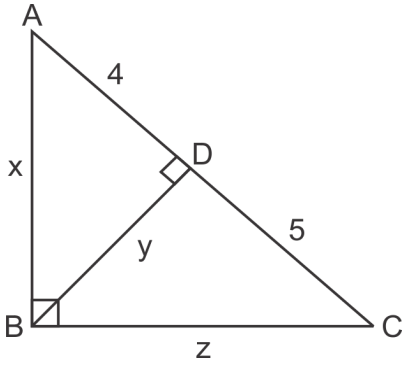
1 Prove that: The ratio of the intercepts made on a transversal by three parallel lines is equal to the ratio of the corresponding intercepts made on any other transversal by the same parallel lines.

2 As shown in figure, two poles of height 8 m and 4 m are perpendicular to the ground. If the length of shadow of smaller pole due to sunlight is 6 m then how long will be the shadow of the bigger pole at the same time ?

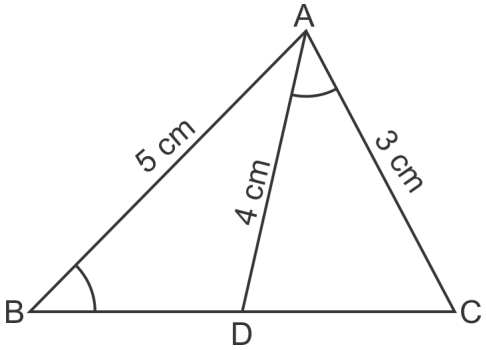


Q.5 Answer the following 8

1 In the given figure, an altitude is drawn to the hypotenuse.
The lengths of different segment are marked in the figure, determine the value of x, y, z

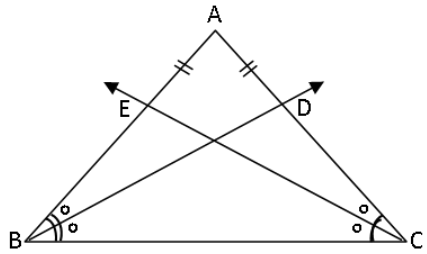


2 In the adjoining figure, D is a point on side BC such that ∠ABD = ∠CAD.
If AB = 5m, AD = 4 cm, and AC = 3 cm.
Find : (i) BC, (ii) DC (iii) A(△ACD) : A(△BCA)



Q.6 Answer the following 6

1 In ΔABC, ray BD bisects ∠ABC and ray CE bisects ∠ACB. If seg AB ≅ seg AC then prove that ED || BC.



2 In bisectors of ∠B and ∠C of ∆ ABC intersect each other in point X. Line AX intersects side BC in point Y. AB = 5, AC = 4, BC = 6 then find $\frac{AX}{XY}$.