Q1. Choose the correct alternatives.   M=4

i) In ΔABC, B-D-C and BD = 6 cm, DC=4cm. what is the ratio of A(ΔABC) to A(ΔACD) ?

   a) 2:3   b) 5:2   c) 3:2   d) 5:3

ii) The sides of two similar triangles are 4:9. What is the ratio of their area?

   a) 2:3   b) 4:9   c) 81: 16   d) 16:81

iii) In ΔABC, AB = 3 cm, BC= 2cm, and AC = 2.5cm. ΔDEF~ΔABC, EF = 4cm. What is the perimeter of ΔDEF?

   a)30cm b)22.5cm c) 15 cm   d) 7.5 cm

iv) In ΔPQR, Seg RS is the bisector of ∠PRO, P5=8, SQ=6, PR=20

   then QR=_____?

   a) 10   b) 15   c) 30   d) 40

Q.2. Solve the following sub questions. (any-5)   M=10

i) Ratio of corresponding sides of two similar triangles is 3:5, then find ratio of their area.

ii) In trapezium ABCD, side AB ǁ side PQ ǁ side DC.
   AP = 15, PD=12, DQ=14. Find BQ.
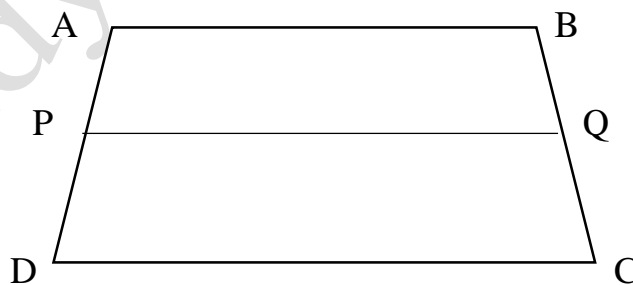
iii) ΔLMN~ΔPQR, 9XA (ΔPQR)=16XA(ΔLMN)
   If QR=20, then find MN.

iv) D is a point on side BC of ΔABC such that, ∠ADC=∠BAC.
   Show that Ac²= BCXDC.

v) If ΔABC ~ ΔDEF, Such that the area of ΔABC is 9cm² and the area of ΔDEF is 16cm². If BC=2.1cm fine length of EF.

vi) A vertical pole of a length 6m casts a shadow of 4m length on the ground.
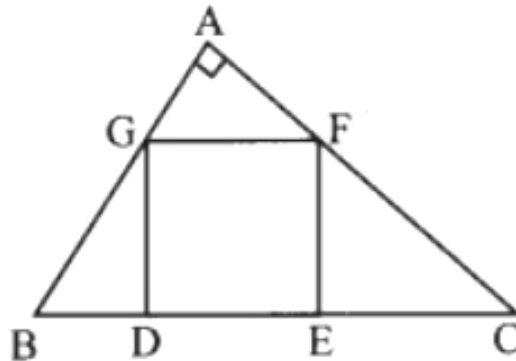   At the same time a tower casts 9 shadow 28m long. Find the height of the tower.

Q.3 Answer the following questions. (any -2)

i) In the figure, △ABC is right angled at B. D is any point on AB.
   Seg DE ⊥ side AC. If AD=6cm, AB=12cm, AC=18cm. Find AE
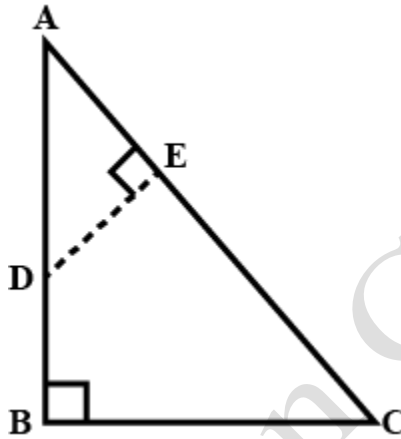
ii) In the given figure, the vertices of square DEFG are on the sides of △ABC.
   ∠A = 90°. Then prove that DE2 = BD × EC
   (Hint: Show that ΔGBD is similar to ΔCFE. Use GD = FE = DE.)

iii) Prove that the angle bisector of a triangle divides the side opposite to the angle in the ratio of the remaining sides.