STD: 10th	1st Unit Test	**Sub – Math 2**
Marks:20		**Time: 1 Hr.**

Q1. Solve the following **(4 Marks)**

1) The ratio of corresponding sides of similar triangles is 3: 5; then find the ratio of their areas.

(A) 3:5 (B) 3:25 (C) 9:25 (D) 9:5

2 $\triangle ABC \sim \triangle PQR$. If AB = 4 cm, PQ = 6 cm and QR = 9 cm then find BC?

(A) 2 (B) 4 (C) 5 (D) 6

3) Out of the following which is the Pythagorean triplet?

(A) (1, 5, 10) (B) (3, 4, 5) (C) (2, 2, 2) (D) (5, 5, 2)

4) Out of the following which is not the Pythagorean triplet?

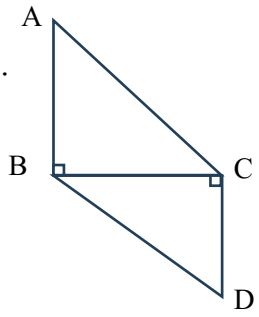
(A) (12, 5, 15) (B) (10, 24, 26) (C) (12, 16, 25) (D) (15, 17, 8)

Q2. Solve the following **(4 Marks)**

1) In figure, seg AB $\perp$ seg BC and seg DC $\perp$ seg BC.

if AB = 3 cm and CD = 4 cm then

$\frac{A(\triangle ABC)}{A(\triangle DBC)}$ =?



2) Base of a triangle is 9 and height is 5. Base of another triangle is 10 and height is 6. Find the ratio of areas of these triangles.

3) In right angled triangle PQR, Hypotenuse PR = 12 and side PQ = 6, then find the measure of $\angle P$

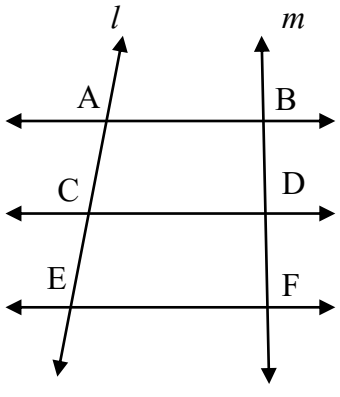
4) Find the diagonal and perimeter of a square whose side is 10 cm.

Q3. Solve the following (Any 3) **(6 Marks)**

1) In figure, line AB || line CD || line EF,

line *l* and line *m* are transversal. If AC = 6,

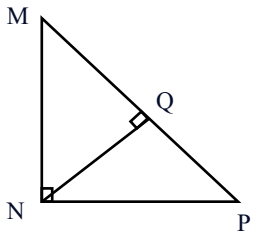
CE = 9, BD = 8 then Find DF.



2) In △ABC, Seg DE || side BC. if AD = 6 cm, DB = 9 cm, EC = 7.5 cm, then find AE.

3) In figure, ∠MNP = 90^0, seg NQ ⊥ seg MP,

MQ = 9, QP = 4, Find NQ.

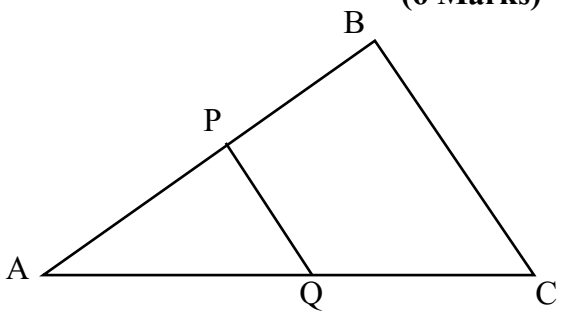


4) Find the side of a square whose diagonal is $12\sqrt{2}$ cm

Q4. Solve the following (Any 2) **(6 Marks)**

1)In △ABC, seg PQ intersect to side AP at point P and intersect to side AC at Q. seg PQ || seg BC.

If PQ divide △ABC in two equal areas Then find, $\frac{BP}{AB}$



2) Prove That: If a line parallel to a side of a triangle intersects the remaining sides in two distinct points, then the line divides the sides in the same proportion.

3) In △PQR, Point S is midpoint of side QR. If PQ = 11, PR = 17, PS = 13 then find QR