SUCCESS KEY TEST SERIES

IX (English)

(Unit Test -1 Math -2 (Ch-1,2,3))

Mathematics Part - 2 -(Ch- 1,2,3)

DATE: 25-09-19

TIME: 2 hrs

MARKS: 40

SEAT NO:

Q.1 A) **Choose the correct alternative.** **(5)**

1) In $\triangle TPQ$, $\angle T = 65^0$, $\angle P = 95^0$ then which of the following statement correct?
   a) PQ < TP   b) PQ < TQ   c) TQ < TP < PQ   d) PQ < TP < TQ.

2) In $\triangle PQR$ if $\angle R > \angle Q$ then _____
   A) QR > PR (B) PQ > PR (C) PQ < PR (D) QR < PR.

3) Two sides of a triangle are 5 cm and 1.5 cm. Find which of the following value is not suitable for the third side.
   A) 3.7 cm B) 4.1 cm C) 3.8 cm d) 3.4 cm

4) Which figure is formed by three non-collinear points ?

   A. Triangle   B. Star   C. Square   D. Rectangle

5) Find d(A,B), if co-ordinates of A and B are -2 and 5 respectively.
   A. -2   B. 5   C. 7   D. 3

B) **Solve the following questions. (Any three)** **(6)**

1) From the information given below find which of the point is between the other two. If the points are not collinear, state so.
   d(X, Y) = 15,   d(Y, Z) = 7,   d(X, Z) = 8

2) From the information given below find which of the point is between the other two. If the points are not collinear, state so.
   d(A, B) = 16   d(C, A) = 9   d(B, C) = 7

3) Co-ordinates of some pair of point is given below. Hence find the distance between each pair.
   i. x + 3, x -3
   ii. -25, -47

4)
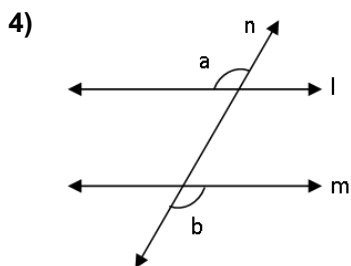
In the adjoining figure $\angle a \cong \angle b$ then prove that line l ∥ line m.

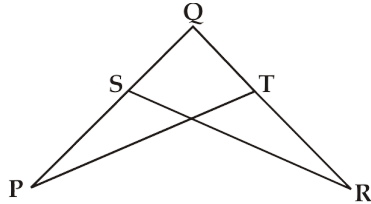**Q.2 A)** **Complete the following Activities. (Any two)** **(6)**

1) If P – Q – R and d(P,Q) = 3.4, d(Q,R) = 5.7 then d(P,R) = ?

$$d(P,R) \quad = \quad d(P,Q) + d(Q,R) \qquad \ldots \underline{\qquad}$$
$$= \quad \underline{\qquad}$$
$$= \quad 9.1 \text{ units}$$

2) In △PQR, ∠P = 70º, ∠Q = 65º, then find ∠R.

In PQR,

∠P + ∠Q + ∠R	= 180º	[____]
∴ _____ + _____ + ∠R	= 180º	
∴ ∠R	= 180º − 135º	
∴ ∠R	= _____	

3)

In figure, ∠P ≅ ∠R, seg PQ ≅ seg RQ.
Prove that, △PQT ≅ △RQS
In △PQT & △RQS

∠P ≅ _____	... (Given)
_____ ≅ seg RQ	... (Given)
∠Q ≅ ∠Q	... (_____)
∴ △PQT ≅ △RQS	... (_____)

4) If the co-ordinate of A is x and that of B is y, find d(A,B)
x = 4, y = -8

A ↔ x ;   B ↔ y
x = 4 ,   y = -8
x > y
d(A, B)   =   _____
                              =   _____
                              =   _____
d(A, B)   =   _____ units
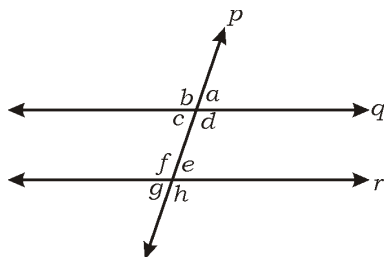
B) Solve the following questions. (Any two)   **(4)**

1) Prove that :- The alternate angles formed by a transversal of two parallel lines are of equal measures.

2) Prove that - The corresponding angles formed by a transversal of two parallel lines are of equal measure.
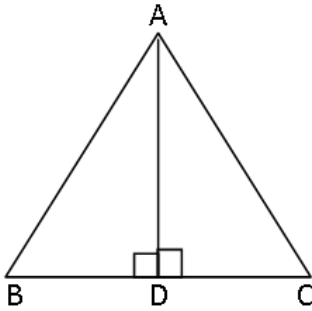
3)

In the adjoining figure line q II r , Line p is a transversal and if ∠a=80° find the values of 'f' and 'g'

Q.3   **Solve the following questions. (Any three)**   **(9)**

1) In △PQR, ∠Q = 90º, PQ = 12, QR = 5 and QS is median. Find l (QS).

2) Prove that, if the bisector of ∠BAC of △ABC is perpendicular to side BC, then △ABC is an isosceles triangle.

3) Prove that : If a pair of corresponding angles formed by a transversal of two lines is congruent then the two lines are parallel.

4) In △ABC, bisectors of ∠A and ∠B intersect at point O. IF ∠C = 70°. Find the measure of ∠ AOB.

Q.4 Solve the following questions. (Any one) (4)

1) The co-ordinates of the points on the number line are as follows.

Points	P	Q	R	S	T
Co-ordinates	− 3	5	2	− 7	9

Find the lengths of: seg PQ, seg PR, seg PS, seg PT.

2)
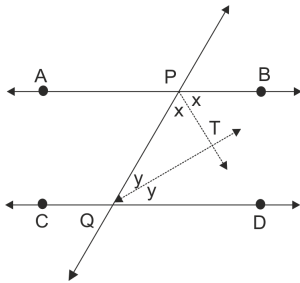
In Figure, line AB ∥ line CD and line PQ is the transversal. Ray PT and ray QT are bisectors of BPQ and PQD respectively.
Prove that m∠PTQ = 90°.

Q.5 Solve the following questions. (Any two) (6)

1) If two angles of a triangle are congruent then the sides opposite to them are congruent.

2) △ ABC is an isosceles triangle in which AB = AC and seg BD and seg CE are medians. Prove that BD = CE.

3) In the figure, *l*(LN) = 5, *l*(MN) = 7, *l*(ML) = 6, *l*(NP) = 11, *l*(MR) = 13, *l*(MQ) = 2, then find *l*(PL), *l*(NR), *l*(LQ).