



P.V.G.'s
Mukhtangan English School & Jr. College,
44, Vidyantagari, Parvati, Pune - 411009.
Unit Test - I (2025-26)
Standard - IX

Subject : Mathematics - II

Marks - 20

Date : 13.08.2025

Time : 8.30 am to 9.30 am

Q1. A) Four alternative answers are given for every subquestions. Choose the correct alternative and write it's alphabet with subquestion number. (2)

i) The number of angles formed by a transversal of two lines is _____.

- | | |
|------|-------|
| A) 2 | B) 4 |
| C) 8 | D) 16 |

ii) How many lines are determined by three distinct points?

- | | |
|-----------------|----------|
| A) two | B) three |
| C) one or three | D) six |

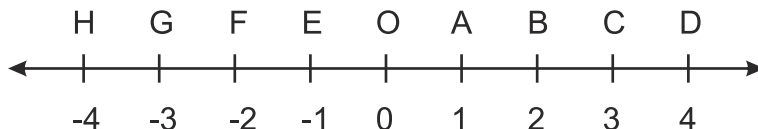
B) Attempt the following subquestions. (2)

i) If $AB = 5$ cm, $BP = 2$ cm, $AP = 3.5$ cm, then compare the segments.

ii) Write the following statement in conditional form 'Every rhombus is a Square'.

Q2. A) Attempt the following activity. (Any 1) (2)

i) Observe the figure and find $d(F, C)$



→ Solution :

Co-ordinate of point F =

Co-ordinate of point C =

$d(F, C) = 3 -$ ----- ($3 > -2$)

$\therefore d(F, C) =$ units

ii) Observe the adjoining figure and fill in given boxes.

a) Pairs of corresponding angles :

a. $\angle ABC$ and

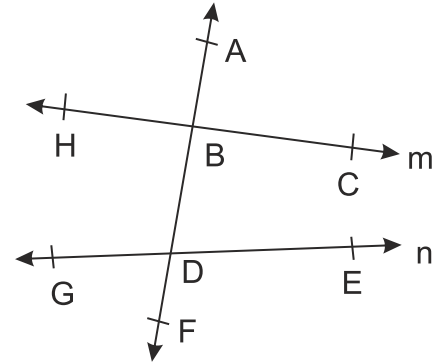
b. $\angle HBD$ and

b) Pair of Alternate interior angle.

$\angle CBD$ and

c) Pair of interior angle

$\angle BDG$ and



B) Attempt the following subquestions. (Any 2)

(4)

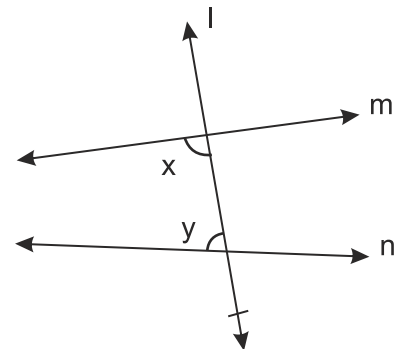
i) Point C is mid point of seg AB. If $AB = 7$ cm, find AC and BC

ii) In adjoining figure,

$$x = 70^\circ, y = 105^\circ$$

Check whether line $m \parallel$ line n .

Justify your answer.



iii) Check whether point Z lies between point X and Y.

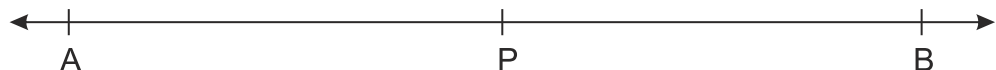
$$d(X, Y) = 15, d(Y, Z) = 7, d(X, Z) = 8$$

Q3. A) Attempt the following activity. (Any 1)

(3)

i) Co-ordinate of point P on a number line is -7 . Find the co-ordinates of points on the same number line, which are at a distance of 8 units from point P by completing the activity given below :

→ Solution :



Co-ordinate of point P is -7 ----- (given)

As shown in the figure, let point A and B are on left and right of point P respectively.

The co-ordinate of point A which is on left of point P

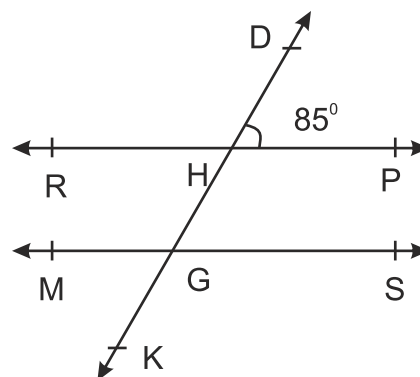
$$P = -7 - \boxed{} = \boxed{}$$

The co-ordinate of point B which is on right of point P

$$P = \boxed{} + \boxed{} = 1$$

∴ The co-ordinate of points 8 units away from P will be $\boxed{}$ and $\boxed{}$

- ii) In adjoining figure,
line $RP \parallel$ line MS and
line DK is the transversal.
 $m\angle DHP = 85^\circ$. Find the
measures of $\angle RHD$, $\angle MGK$
by filling in the boxes given
below.



→ Solution :

1. $\angle DHP = 85^\circ$ ----- (given)

$$\angle DHP + \boxed{} = 180^\circ \text{----- reason} \rightarrow \boxed{}$$

$$\therefore 85^\circ + \boxed{} = 180^\circ$$

$$\therefore \angle RHD = \boxed{}$$

2. $\angle DHP \cong \angle MGK$ ----- reason $\rightarrow \boxed{}$

$$\therefore \angle MGK = \boxed{} \quad (\text{given : } \angle DHP = 85^\circ)$$

B) Attempt the following subquestions. (Any 1) (3)

- i) Prove : The corresponding angles formed by a transversal of two parallel lines are of equal measure.
- ii) Prove : The opposite angles formed by two intersecting lines are equal in measure.

Q4. Attempt the following subquestions. (Any 1)

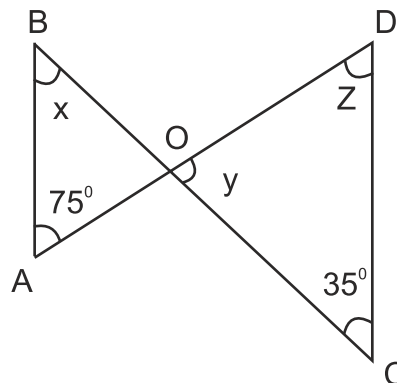
(4)

- i) In the adjoining figure,

$\text{seg AB} \parallel \text{seg CD}$.

$\angle A = 75^\circ$ and $\angle C = 35^\circ$

Find the value of x, y, z .



- ii) On a number line points A, B and C are such that $d(A, C) = 10$, $d(C, B) = 8$. Find $d(A, B)$ considering all possibilities and sketch proper figure of it.

