PVG's

Muktangan English School & Jr. College, Pune - 9

Unit Test I (2024-25)
Standard - IX

Subject - Mathematics (Part-II) | **Marks - 20**
Date - 13/8/2024 | **Time - 9.30 a.m. to 10.45 a.m.**

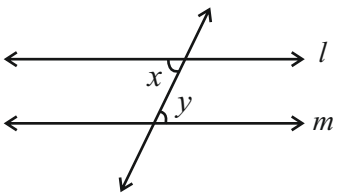
Q.I (A) Select the correct alternative to answer the following questions. (2)

1) In Δ ABC, $\angle A = 76^o$, $\angle B = 48^o$, $\angle C$ = ...
(a) 66^o (b) 56^o (c) 124^o (d) 28^o

2) Angles in linear pair are always ..... .
(a) Congruent (b) Acute (c) Supplementary (d) Complementary

Q.I (B) Attempt the following subquestions. (2)

1) In the adjoining figure
if $\angle x = 80^o$ & $\angle y = 80^o$, then
check whether line l II line m,
Justify.



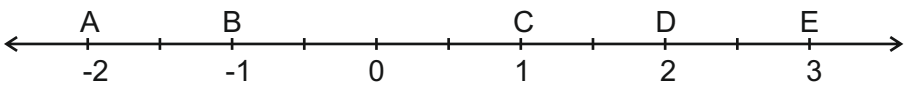
2) Write the antecedent and the consequent of the following statements :
'If all sides of a triangle are congruent then all angles are congruent.'

Q. II (A) Attempt any one of the following activity. (2)

1) Point M is mid point of seg PQ. If PQ = 9 cm then find the length of PM.

Solution :
As, Point M is mid point of ☐
$\therefore$ PM = $\frac{1}{2}$ X ☐
= $\frac{1}{2}$ X ☐
$\therefore$ PM = ☐ cm

2) Observe the figure and find d(B,C)

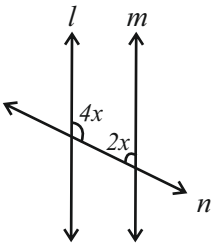


Solution :
Co-ordinate of point B = ☐
Co-ordinate of point C = ☐
$\therefore$ d(BC) = 1 - ☐ ..... [1 > -1]
= ☐ units

Q. II(B) Attempt any two of the following subquestions. (4)

1) Check whether point Q lies between points P & R.
d(P,Q) = 10, d(QR) = 12 and d(PR) = 22

2) In the adjoining figure,
line l II line m
and line 'n' is transversal.
then find the value of 'x'

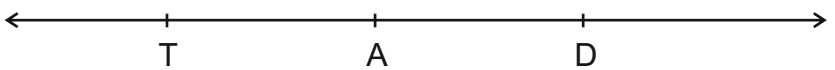


3) If B is mid point of AC such that A-B-C and AB = 3 cm, find AC

Q.III (A) Attempt any one of the following activity. (3)

1) The co-ordinate of point A on a number line is 5. Find the co-ordinate of points on the same number line which is 13 units away from A.

Solution :



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

The co-ordinate of point T which is on left of A = 5 - ☐ = ☐

The co-ordinate of point D which is on right of A is = ☐ + ☐ = 18

∴ The co-ordinate of points 13 units away from A will be ☐ and ☐

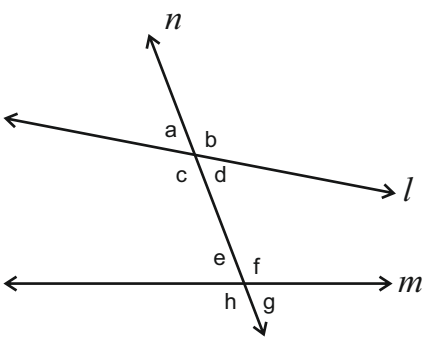
2) Observe the adjoining figure and write the pairs of corresponding angles, alternate interior angles and interior angles.

Solution :

(i) Pair of corresponding angles :
(a) ∠a, ☐ (b) ∠d, ☐

(ii) Pair of alternate angles :
(a) ∠c, ☐ (b) ∠d, ☐

(iii) Pair of interior angles :
(a) ∠c, ☐ (b) ∠d, ☐



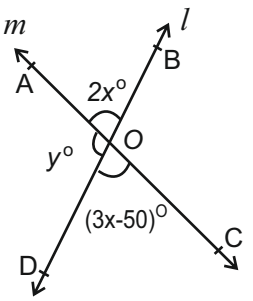
Q.III (B) Attempt any one of the following subquestions. (3)

1) **Prove :** The opposite angles formed by two intersecting lines are equal in measure.

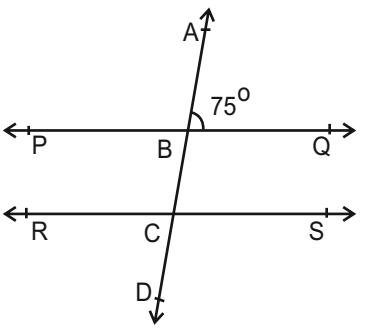
2) **Prove :** The alternate angles formed by a transversal of two parallel lines are equal in measure.

Q.IV Attempt any one of the following subquestions. **(4)**

1) In the adjoining figure, line l and line m intersect each other at point O.
If $\angle$ AOD = y^o, $\angle$ AOB = $2x^o$, $\angle$ DOC = $(3x - 50)^o$ then, find the value of x and y.



2) In the adjoining figure, line PQ II line RS and line AD is a transversal.
If $\angle$ ABQ = 75^o, find
(a) $\angle$ ABP
(b) $\angle$ BCR
(c) $\angle$ RCD
(d) $\angle$ ACS



❖❖❖❖❖