Q.1 A) Solve any two sub-questions from the following.   2

1) Write any one Euclid's postulate.

2) Two parallel lines are intersected by a transversal. If measure of one of the alternate interior angles is 63^0 then find the measure of another angle.

3) State the converse of the following statement:-

"If the opposite sides of a quadrilateral are congruent then it is a parallelogram."

**B) Solve any two sub-questions from the following.**   2

1) Write the following statement in "If-then" form:-

The diagonals of an isosceles trapezium are congruent.

2) If two lines are intersected by a transversal then what is the sum of the measure of the interior angles on either side of the transversal?

3) The co-ordinate of B is −4 and that of D is 9. Find d(B,D).

Q.2 A) Choose the correct alternative answers for given below the questions.   4

1) To determine a line, how many points are minimum required?   a) 2   b) 1   c) 3   d) infinite

2) A-B-C then find $d(A,B)$, if $d(A,C) = 7$, $d(B,C) = 3$

   a) 3   b) 4   c) 7   d) none of these

3) The measure of the alternate angle of the angle which is in linear pair with the angle of measure 65^0 is ___ .

   a) 65^0 b) 25^0 c) 115^0 d) 130^0

4) In $\triangle PQR$, $\angle P = 77^0$, $\angle Q = 49^0$ then $\angle R =$ ___?
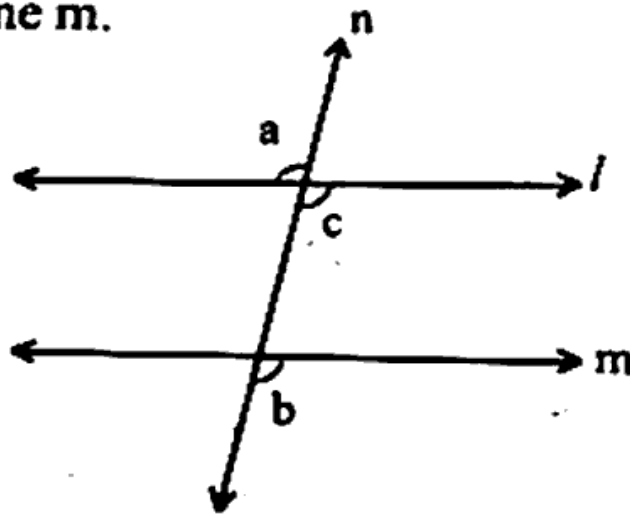
   a) 45^0 b) 126^0 c) 28^0 d) 54^0

2

Q.2 B) Solve any three sub-questions from the following. 6

1) Observe the given number line and answer the questions.
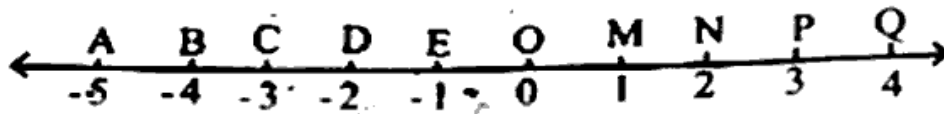
i)   d (A, E) = _____ .

ii) ray CA and ray_____are opposite rays.

iii) seg BD and seg CE are congruent segments and measure of each segment is _____units.

iv) Write the name of the endpoint of ray DP.

2)   In the adjoining figure, if ∠a ≅ ∠b then prove that the line *l* ‖ line m.

Given : ∠a ≅ ∠b

To prove: line *l* ‖ line m

Proof : ∠a ≅ ∠c   (..........) ____(i)

But ∠a ≅ ∠b   (given) ____(ii)

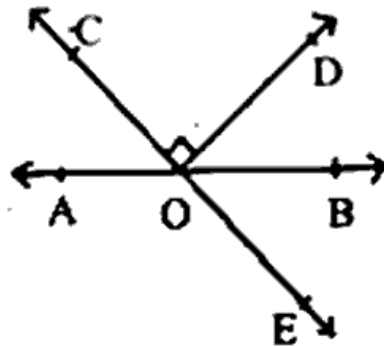From(i) and (ii); ∠........ ≅ ∠........

But they are.........angles, so line *l* ‖ line m (by.......test)

Q.2 B) 3) Observe the figure and complete the proof. (activity.)
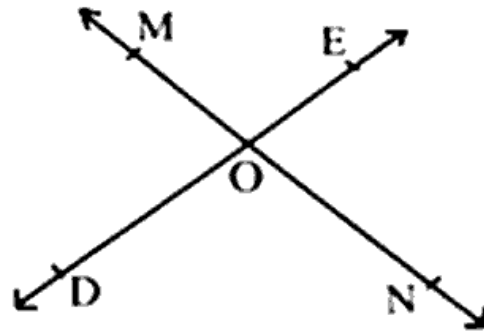
i) $\angle MOE + \angle NOE = 180^0$ ___(......)

ii) $\angle NOE + ... = 180^0$ ___(Angles forming linear pair)

iii) $\angle MOE + \angle NOE = \angle NOE + \angle .....$ [From(i) and(ii)]

iv) $\angle MOE = \angle ......$ https://www.maharashtrastudy.com

4) In the given figure, $\angle COD = 90^0$ and $\angle BOE = 72^0$.
Find $\angle AOC$ and $\angle BOC$.

Solution: $\angle AOC = \angle BOE$ (Reason........)

$\angle AOC = ...^0$

$\angle AOC + \angle COD + \angle BOD = 180^0$ (Angles forming linear pair)

$......... + 90^0 + \angle BOD = 180^0$

$\angle BOD = ...^0$

$\angle BOC = \angle BOD + \angle COD$ (Angle addition property)

$\angle BOC = ...^0$

4

Q.3 A) Solve any one sub-questions from the following.   3

1) Given AB ‖ CD ‖ EF and QT is the transversal.
   If y:z = 5:4 then find the value of x.
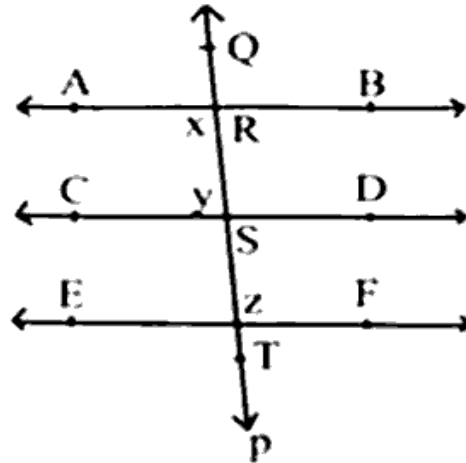
2) The co-ordinates of point B on the number line is − 3.
   Find the co-ordinates of the point which are at a distance
   of 6 units from B.

B) Solve any one sub-questions from the following.   3

1) Determine which point is between the other two if the
   given points are collinear after finding the $l(Q,R)$ when
   $l(P,Q)$ =20 and $l(P, R)$ = 17 (Consider all possibilities)

2) The exterior angles obtained on producing the base of
   a triangle both ways are 100^0. and 120^0.

   Find the measure of all internal angles of ΔABC.
   (With Reasons.)

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