VELAMMAL NEWGEN EDU NETWORK

PERIODIC TEST – 2 [2024 – 2025]

9

MATHEMATICS

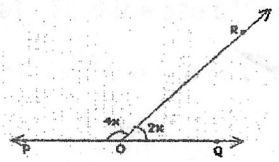
Time: 1 hr 30 min **Date:** 08.08.2024 **Max:** 40 Marks

I. Multiple choice questions :- **(1 × 5 = 5)**

1) The linear equation $3x + 4y = 8$ has _____

a) a unique solution b) two solutions c) infinitely many solutions d) no solution

2) In the given figure, POQ is a straight line then the value of x is _____

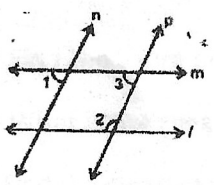


a) 20° b) 30° c) 40° d) 50°

3) The point at which the linear equation $2x - 3y = 6$ meets the x-axis is _____

a) (2, 0) b) (3, 0) c) (0, 2) d) (0, 3)

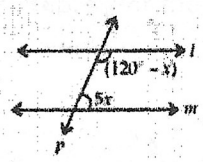
4) In the given figure, if l || m, n || p and ∠ 1 = 85° then ∠ 2 is _____



a) 85° b) 95° c) 100° d) 105°

5) **Assertion:** The value of x from the adjoining figure, if l || m is 15°

Reason: If two parallel lines are intersected by a transversal, then each pair of corresponding angles so formed is equal.



(a) Both Assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).

(b) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).

(c) Assertion (A) is true but reason (R) is false.

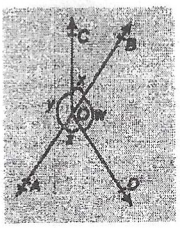
(d) Assertion (A) is false but reason (R) is true.

II. Answer the following:- **(2 × 5 = 10)**

6) Write the linear equation $7 = 2y$ in general form and indicate the values of a, b and c.

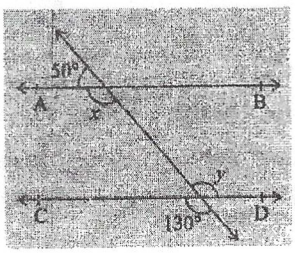
7) Find two solutions of linear equation $3x + 2y = 12$

8) In figure, if $x + y = w + z$, then prove that AOB is a line.



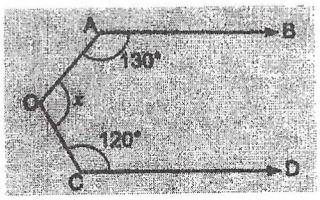
9) Find the i) complement of 50° (ii) supplement of 105°

10) In the given figure, find the values of x and y.



III. Solve the following:- **(3 × 4 = 12)**

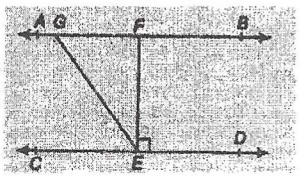
11) Determine the value of x in the given figure.



12) For what value of a, x=2 and y=3 is a solution of $(a+1)x - (2a+3)y - 3 = 0$

13) If two lines intersect each other, then prove that the vertically opposite angles so formed are equal.

14) In the given figure, if AB || CD, EF ⊥CD and ∠GED = 126°, find ∠AGE, ∠GEF and ∠FGE.



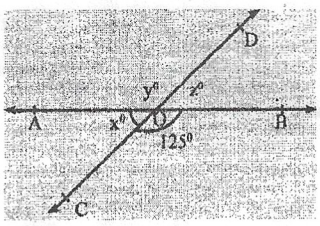
IV. Case study based questions:- **(4 × 2 = 8)**

15) A student Vinu of class IX cannot write his examination, due to an injury in his arm. Sonu a student of class VII writes for him. If the age of Vinu is "x " years and the age of Sonu is "y" years. The linear equation given for their ages is $2x + y = 50$ years.

a) Find the age of Sonu, if the age of Vinu is 14 years. (2)

b) Find the age of Vinu , if the age of Sonu is 10 years (2)

16) In the given figure, the two lines AB and CD intersect at a point O such that ∠BOC=125°



a) Find the value of x. (1)

b) What is the measure of ∠ y? (1)

c) Find the measure of ∠ BOD. (1)

d) Find the measure of reflex ∠ BOC. (1)

V. Answer the following:- **(5 × 1 = 5)**

17) Represent the given linear equation $2x + y = 8$ in the graph .

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