

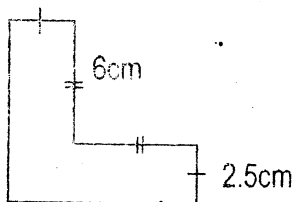
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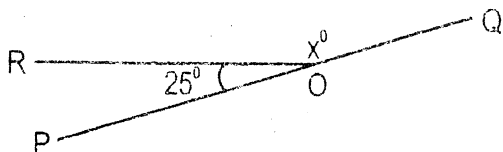
PART - I

Answer all the questions, 2 marks each for one question.

01. Write the next two terms of the following number pattern.  
7, 11, 15, 19, ....., .....
02. When the general term of the number pattern is  $2n - 1$ , which term is 449?
03. Simplify.  $(+10) + (-3)$
04. Find the perimeter of the given composite plane figure.



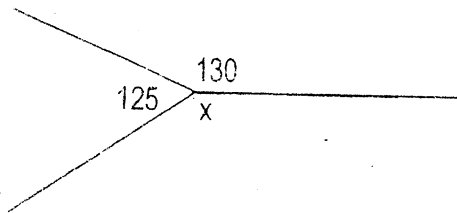
05. Find the complement of  $30^\circ$ .
06. Using the number line find the value of  $(+5) - (+4)$
07. PQ is a straight line segment. Find the value of x.



08. If  $P = \{\text{square numbers from 1 to 30}\}$  show set P as a venn diagram.
09. Find the value.

$$\frac{(+4) \times (-2) \times (+3)}{(-4) \times (+6)}$$

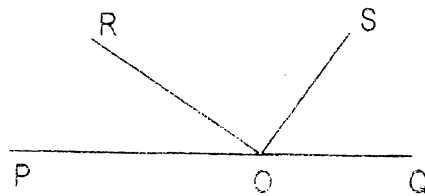
10. Simplify.  $3(x-5) - 2(x-1)$
11. Find the Highest common factor of  $12xy$  and  $9x^2y^2$ .
12. Find the value of  $x$ .



13. Write as the product of two factors  $4x^2 + 12xy - 16xy^2$ .
14. Simplify.  $(5x)^2 \times (2x)^3$
15. Underline the correct statement.

The pair of adjacent angles of the given figure is,

- (i)  $\hat{P}OQ$  and  $\hat{R}OS$
- (ii)  $\hat{P}QR$  and  $\hat{S}OQ$
- (iii)  $\hat{P}OS$  and  $\hat{S}OQ$



16. There are 20 faces and 12 vertices in a Regular Icosahedron. By using the Euler's Relationship find the number of edges.
17. Find the value.  $\sqrt{3 \times 2 \times 5 \times 2 \times 5 \times 3}$
18. Add.
- |       | Months | Dates | Hours |
|-------|--------|-------|-------|
|       | 5      | 12    | 15    |
|       | 4      | 25    | 10    |
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19. The Area of the square shaped flower bed is  $625m^2$ . Find the one side length and then find the perimeter of it.
20. Write 5.08t as kilograms.

## PART - II

Write answer only five questions. 12 marks each for one question.

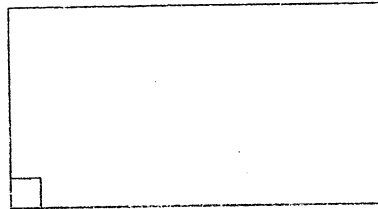
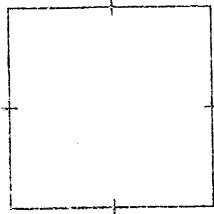
01. (A) The general term of the triangular number pattern which is started from 1 is,

$$\frac{n(n+1)}{2}$$

- (i) Find the first term of the given number pattern.
- (ii) Find the 12th term of the given number pattern.
- (ii) If  $15 \times 16 = 240$  then which term is 120 of the given number pattern.

- (B) (i) Find the sum of the 12th term of the number pattern which general term is '2n' and the 13th term of the number pattern which general term is  $2n - 1$ .
- (ii) Which term of the number pattern of the sum of the above answer is satisfied of general term  $2n$ .

02. (A)



The perimeter of the given rectangle is twice the perimeter of the square. One side length of a square is 20cm and length of a rectangle is 50cm.

- (i) Find the perimeter of the square?
- (ii) Find the breadth of a rectangle.

- (b) The perimeter of the square shape tile is 40cm.

The length of the rectangular shape living room is 6m and the breadth is 4m.

- (i) How many tiles are needed length wise without gaps in one row.
- (ii) How many tiles are needed breadth wise without gaps in one column.
- (iii) How many tiles are needed to lay tiles completely.

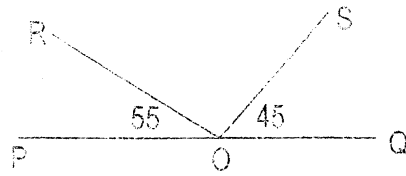
03. (A) Price of 1kg of sugar is Rs. X, price of 1kg of dhal is Rs. Y and price of 1kg of tea leaves is Rs. Z. write an algebraic expression for the money spent to buy 2kg of sugar,  $1\frac{1}{2}$  kg of dhal and 250g of tea leaves.

- (B) Simplify.

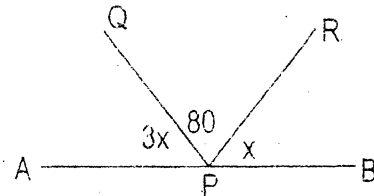
- (i)  $4(3p + 2q - 3)$
- (ii)  $3(x + 4) - 2(x - 5)$

- (C) If  $a = 3$ ,  $b = 4$  find  $2(3a + b) + a - 4b$

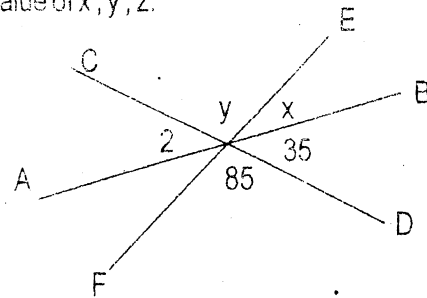
- 04 (i) According to the given data is POQ a straight line or not? Give answer for your answer.



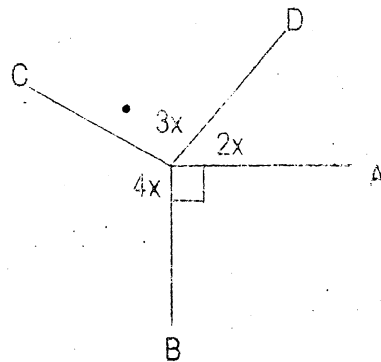
- (ii) AB is a straight line segment. Find the magnitude of the  $\angle APQ$



- (iii) AB, CD, EF are three straight line segments. Find the value of x, y, z.



- (iv) According to the given data, Find the value of  $2x$ .



05. (A) The mass of a lorry is 2.750 t. Mass of rice 5.104t potatoes 1.025t, dhal 0.25t are loaded to it.
- Find the total mass of the lorry with the items
  - Write it as kilograms. (kg)
- (b) The mass of a iron pole is 2t 500kg. Find the mas of 5 such iron poles.
- (C) Among 150 families 4.05t of dhal is distributed. Find the quantity received by one family in killograms.
- (D) A certain house need 13.5kg of rice for consumption for one week. Find the total mass of rice needed for one month.
06. (i) Write as a power of a product  $27 \times p^3 \times q^3$
- (ii) Find the value of x in the expression  $x^2 = b^2 - 4ac$   
If  $a = (-1)$ ,  $b = 1$  and  $C = 2$
- (iii) Simplify.  $(4p)^2 \times (3p)^3$
- (iv) show that  $27 \times 64$  as  $12^3$ .