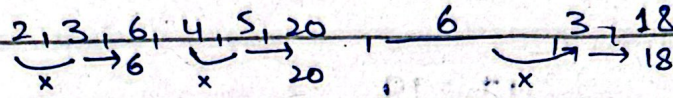


## Assignment:

### QNO1:

A) Find the missing terms:

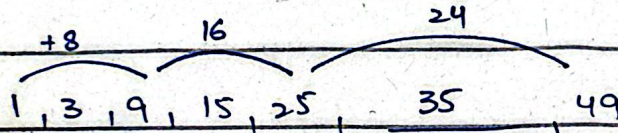
1. 2, 3, 6, 4, 5, 20, \_\_\_\_\_, 3, 18.



Missing no. is 6.

explain the logics in detail in the form of statements as well.

2. 1, 3, 9, 15, 25, \_\_\_\_\_, 49



$$1^2 = 1$$

$$2^2 = 4 - 1 = 3$$

$$3^2 = 9$$

$$4^2 = 16 - 1 = 15$$

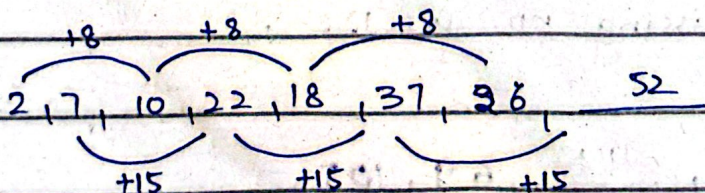
$$5^2 = 25$$

$$6^2 = 36 - 1 = 35$$

$$7^2 = 49$$

Missing no. is 35.

3. 2, 7, 10, 22, 18, 37, 26, \_\_\_\_\_



Missing no. is 52.



4.  $34, 7, 31, 14, 40, 28, 43, \underline{56}$

Diagram showing operations:  $34 \xrightarrow{\times 2} 7 \xrightarrow{+3} 31 \xrightarrow{\times 2} 14 \xrightarrow{+3} 40 \xrightarrow{\times 2} 28 \xrightarrow{+3} 43 \xrightarrow{\times 2} 56$

Missing no. is 56.

5.  $5, 7, 11, \underline{\quad}, 17, 19$

Diagram showing operations:  $5 \xrightarrow{+2} 7 \xrightarrow{+4} 11 \xrightarrow{+2} 13 \xrightarrow{+6} 19$

Set of prime numbers.

35

QNO2:

I.  $2, 4, 12, 48, \underline{240}$

Diagram showing operations:  $2 \xrightarrow{\times 2} 4 \xrightarrow{\times 3} 12 \xrightarrow{\times 4} 48 \xrightarrow{\times 5} 240$

Missing no. is 240.

II.  $5, 10, 13, 26, 29, 58, 61, \underline{122}$

Diagram showing operations:  $5 \xrightarrow{\times 2} 10 \xrightarrow{+3} 13 \xrightarrow{\times 2} 26 \xrightarrow{+3} 29 \xrightarrow{\times 2} 58 \xrightarrow{+3} 61 \xrightarrow{\times 2} 122$

Missing no. is 122.

III.  $15, 19, 28, \underline{44}, 69, 105$

Diagram showing operations:  $15 \xrightarrow{+4} 19 \xrightarrow{+9} 28 \xrightarrow{+16} 44 \xrightarrow{+25} 69 \xrightarrow{+36} 105$

$28 + 16 = 44 + 25 = 69$  Missing no. is 44.



IV.  $\begin{matrix} 2 \\ \uparrow \\ C/D \\ \downarrow \\ B, E, K, W, \end{matrix}$   $\begin{matrix} 5 & 11 \end{matrix}$  ?

V.  $\{(476 + 424)^2 - 4 \times 476 \times 424\} = ?$

Using BODMAS rule.

$$\{(900)^2 - 4 \times 476 \times 424\} = ?$$

$$\{810000 - 4 \times 476 \times 424\} = ?$$

$$\{810000 - 807296\} = ?$$

$$= 2704$$

CSS-2024

a.  $121, 11, 81, 9, 49, 7$   
 $\begin{matrix} \underbrace{121}_{11^2} & \underbrace{81}_{9^2} & \underbrace{49}_{7^2} \end{matrix}$

b.  $100, 50, 25, 12.5, 6, 6.25$   
 $\begin{matrix} \underbrace{100}_{\text{half}} & \underbrace{50}_{\text{half}} & \underbrace{25}_{\text{half}} & \underbrace{12.5}_{\text{half}} & \underbrace{6}_{\text{half}} & \underbrace{6.25}_{\text{half}} \end{matrix}$



c.  $4, 9, 64, 125, 1296, 2401$

$\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$   
 $2^2 \quad 3^2 \quad 4^3 \quad 5^3 \quad 6^4 \quad 7^4$

d.  $2, 5, 12, 24, 48, 96$

$\frac{2}{3}, \frac{5}{7}, \frac{12}{12}, \frac{24}{24}, \frac{48}{48}, \frac{96}{96}$

e.  $44, 22, 66, 33, 132, 66$

$\frac{44}{2}, \frac{22}{2}, \frac{66}{3}, \frac{33}{3}, \frac{132}{4}, \frac{66}{2}$

⇒ Alphabetical Series:

1.  $\text{A, D, I, P, Y, J, W}$

$\text{A} \rightarrow \text{D} \rightarrow \text{I} \rightarrow \text{P} \rightarrow \text{Y} \rightarrow \text{J} \rightarrow \text{W}$

2.  $\text{AZ, GT, MN, SH, YB}$

$\text{AZ} \rightarrow \text{GT} \rightarrow \text{MN} \rightarrow \text{SH} \rightarrow \text{YB}$

3.  $\text{PMT, OOS, NQR, MSQ}$

$\text{PMT, OOS, NQR, MSQ} \rightarrow \text{P} = \text{P}$

$\text{PMT, OOS, NQR, MSQ} \rightarrow \text{UP} = \text{UP}$

$\text{drop N, drop P, drop R, drop T}$

$\text{PMT, OOS, NQR, MSQ} \rightarrow \text{LUP} = \text{LUP}$