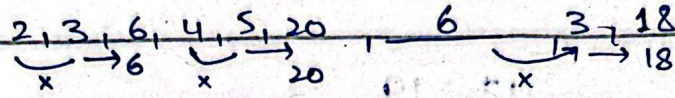


Assignment:

QNO1:

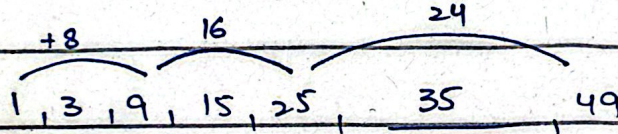
A) Find the missing terms:

1. 2, 3, 6, 4, 5, 20, _____, 3, 18.



Missing no. is 6.

2. 1, 3, 9, 15, 25, _____, 49



$$1^2 = 1$$

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

$$3^2 = 9$$

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

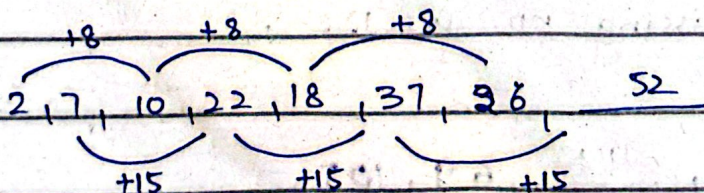
$$5^2 = 25$$

$$6^2 = 36 - 1 = \boxed{35}$$

$$7^2 = 49$$

Missing no. is 35.

3. 2, 7, 10, 22, 18, 37, 26, _____



Missing no. is 52.

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

Relationships: $34 \times 2 = 68$, $7 \times 3 = 21$, $31 \times 2 = 62$, $14 \times 3 = 42$, $40 \times 2 = 80$, $28 \times 3 = 84$, $43 \times 2 = 86$.
 $34 + 3 = 37$, $7 + 3 = 10$, $31 + 3 = 34$, $14 + 3 = 17$, $40 + 3 = 43$, $28 + 3 = 31$.

Missing no. is 56.

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

$5, 7, 11, \textcircled{13}, 17, 19$

Relationships: $5 \times 2 = 10$, $7 \times 2 = 14$, $11 \times 2 = 22$, $17 \times 2 = 34$, $19 \times 2 = 38$.
 $5 + 2 = 7$, $7 + 2 = 9$, $11 + 2 = 13$, $17 + 2 = 19$, $19 + 2 = 21$.

Set of prime numbers.

Qno 2:

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

Relationships: $2 \times 2 = 4$, $4 \times 3 = 12$, $12 \times 4 = 48$, $48 \times 5 = 240$.

Missing no. is 240.

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

Relationships: $5 \times 2 = 10$, $10 + 3 = 13$, $13 \times 2 = 26$, $26 + 3 = 29$, $29 \times 2 = 58$, $58 + 3 = 61$, $61 \times 2 = 122$.

Missing no. is 122.

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

Relationships: $15 + 4 = 19$, $19 + 9 = 28$, $28 + 16 = 44$, $44 + 25 = 69$, $69 + 36 = 105$.
 $15 \div 2 = 7.5$, $19 \div 2 = 9.5$, $28 \div 2 = 14$, $44 \div 2 = 22$, $69 \div 2 = 34.5$, $105 \div 2 = 52.5$.
 $15 \times 2 = 30$, $19 \times 2 = 38$, $28 \times 2 = 56$, $44 \times 2 = 88$, $69 \times 2 = 138$, $105 \times 2 = 210$.

$28 + 16 = 44$, $44 + 25 = 69$, $69 + 36 = 105$.
 $28 \div 2 = 14$, $44 \div 2 = 22$, $69 \div 2 = 34.5$, $105 \div 2 = 52.5$.

Missing no. is 44.

IV.

2
↑
C/D

B, E, K, W, — ?
5 11

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
 $\underbrace{121}_{11^2}, \underbrace{81}_{9^2}, \underbrace{49}_{7^2}$

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

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

$\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$

2^2 3^2 4^3 5^3 6^4 7^4

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

$\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$ $\downarrow$

3 7 12 24 48

$\times 2$ $\times 2$

48 96

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

$44 \div 2$ 22×3 $66 \div 2$ 33×4 $132 \div 2$

⇒ Alphabetical Series:

1. A, D, I, P, Y, J, W

② ④ ⑥ ⑧ ⑩ ⑫

2. AZ, GT, NN, SH, YB

3. PMT, OOS, NQR, MSQ

PMT, OOS, NQR, MSQ -- P = P

PMT, OOS, NQR, MSQ -- UP = UP

drop N drop P drop R drop T

PMT, OOS, NQR, MSQ -- UP = LUP