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Batch : 63
Subject : General Science Ability.

⇒ Q. 6(a) If the sum of four number is 105. When 3 is added to a number, twice of another number, five times of third number and fourth number become equal to each other. What are these numbers in ascending order?

Sol

Let the four numbers are w, x, y, z . According to given condition

$$w + x + y + z = 105 \quad \rightarrow (1)$$

$$3 + w = 2x = 5y = z$$

Numbers in ascending order

$3 + w = 2x$	$5y = 2x$	$z = 2x$
$w = 2x - 3$	$y = \frac{2x}{5}$	

Put all these values to equation (1)

$$2x - 3 + x + \frac{2x}{5} + 2x = 105$$

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$$2x - 3 + x + \frac{2x}{5} + 2x = 105$$

$$5x + \frac{2x}{5} = 105 + 3$$

$$\frac{25x + 2x}{5} = 108$$

$$27x = 108 \times 5$$

$$27x = 540, \quad x = \frac{540}{27}$$

$$\Rightarrow \boxed{x = 20}$$

$$Z_1 = 2x$$

$$Z = 2(20)$$

$$\Rightarrow \boxed{Z = 40}$$

$$y = \frac{2x}{5}, \quad \frac{2(20)}{5}$$

$$\Rightarrow \boxed{y = 8}$$

$$W = 2x - 3$$

$$W = 2(20) - 3$$

$$W = 40 - 3 = 37$$

$$\Rightarrow \boxed{W = 37}$$

$$\Rightarrow \boxed{8, 20, 37, 40}$$

(b)

Find out the correct word of from the following Jumbled Spellings.

(i) UCTREUTRS

(ii) CIHPROSTATAAC

(iii) LOVONAC

(iv) YNTIAUMH

(v) NNTHORER

- (i) UCTREUTRS = STRUCTURE
 (ii) LOVONAC = VOLCANO
 (iii) CHPROSTATAAC = CATASTROPHIC.
 (iv) YNTSAUMH = HUMANITY.
 (v) NNTHORER = NORTHERN.

(C)

Find the missing numbers in series.

(i) 121, 11, 81, 9, ?, 7

Sol. 121, 11, 81, 9, ~~49~~, 7 $(11)^2, 11, (9)^2, 9, (7)^2, 7$ 121, 11, 81, 9, 49, 7 Answer

(ii) 100, 50, 25, ?, 6.25

~~2~~ × 50, ~~3~~ × 25, 2 × 6.25

100, 50, 25, 12.5, 6.25

100, 50, 25, 12.5, 6.25 Answer

(iii)

4, 9, 64, 125, 1296, ?

 $(2)^2, (3)^2, (4)^3, (5)^3, (6)^4, (7)^4$ 4, 9, 64, 125, 1296, 2401 Answer

(iv)

2, 5, 12, 24, 48, ?

2, 5, 12, 24, 48, 100 Answer

2+2=4+1, 5 → 5+5+2, 12, 12+12, 48, 48+48+100

(v) 44, 22, 66, 33, 132, ?

$$44 \times \frac{1}{2} = 22 \times 3 = \frac{66}{2}, \quad 33 \times 4 = \frac{132}{2} = 66$$

44, 22, 66, 33, 132, 66 Answer.

(d)

If the sum of three digit number is 15 and sum of 10th and unit digit is 12. The difference of unit digit from 10th digit is equal to 02. What is the three digit number?

Let consider unit number is = U, T, H.

According to given condition

Sum of three digit number = 15

$$H + T + U = 15 \quad \rightarrow (1)$$

$$T + U = 12 \quad \rightarrow (2)$$

$$T - U = 02 \quad \rightarrow (3)$$

From equation (3)

$$\boxed{T = 2 + U} \quad \rightarrow (A)$$

(A) Put in eqn. (2)

$$T + U = 12$$

$$2 + U + U = 12$$

$$2U = 12 - 2$$

$$2U = 10, \quad U = \frac{10}{2}$$

$$\boxed{U = 5} \quad \rightarrow (B)$$

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Put the value of U in eqn (A)

$$T + U = 12$$

$$T + 5 = 12$$

$$T = 12 - 5$$

$$\boxed{T = 7} \quad \text{--- (C)}$$

Put the value of T and U in eqn (B)

$$H + T + U = 15$$

$$H + 7 + 5 = 15$$

$$H + 12 = 15$$

$$H = 15 - 12$$

$$\boxed{H = 3} \quad \text{--- (D)}$$

So

$$H T U = \boxed{375} \text{ is the}$$

three digit number require.

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