Talat Fatima Online Test Batch
GISA - Test 3.

Question No. 01:

a) Let the three consecutive numbers

a_1, a_2 and a_3 $\quad a_1 = a_2 - 2$

$a_3 = a_2 + 2$.

$a_1 + a_1 + 2 + a_1 + 2 = 97$

$3a_1 + 4 = 97$

$3a_1 = 97 - 4 \Rightarrow \boxed{a_1 = 31}$

Let the Prime nos near 31 are 29, 31, 35 and 37

$29 + 31 + 35 = 95$ ✗

$29 + 31 + 37 = 97$ ✓

So, the correct and consec. prime are 29, 31 & 37.

b) Father of my uncle → Grand father
Daughter of grand father → mother
Son of mother → brother

So,

Boy is brother of girl. Both are siblings.

c P(E) = (1,2), (1,4), (1,6), (2,1), (2,2), (2,3), (2,4)
(2,5), (2,6), (3,2), (3,4), (3,6), (4,1), (4,2)
(4,3), (4,4), (4,5), (4,6), (5,2), (5,4), (5,6)
(6,1), (6,2), (6,3), (6,4), (6,5), (6,6) = 27

$$P(E) = \frac{N(E)}{n(S)} = \frac{27}{36} = 0.75$$

= 75%.

Probability of number to be even is 75%

d If the month begins on Sunday.
Total sunday = 5
Other days = 25
Visits on sunday = 5 × 510 = 2550
Visits on other days = 240 × 25 = 6000
Total visitors in a month = 2550 + 6000
= 8550

$$\text{Avg visitor a day} = \frac{8550}{30} = 285$$

Question No. 03:

a A can do the work in 15 days.
B can do work in 20 days.
So the work of A & B is 1/15 and 1/20 of total work.

Together 1st day work =

$$\frac{1}{15} + \frac{1}{20} = \frac{7}{60}$$

Work in 4 days $= 4 \times \frac{7}{60} = \frac{7}{15}$

Total Work left = Total − Done

$$= 1 - \frac{7}{15} = \frac{8}{15}$$

b.

Let The nos 3x and 5x.

3x−9 and 5x−9 = New nos

New ration 12 : 23.

$3x-9 : 5x-9 :: 12 : 23$

POM = POE

$(3x-9) 23 = 12 \times (5x-9)$

$69x - 207 = 60x - 108 \Rightarrow 69x - 60x = -108 + 207$

$9x = 99 \quad x = 11$

So, nos are 3x & 5x = 33 and 55.

Smaller one is 33.

c. Average of A, B, C = 45

So it is $3 \times 45 = 135$.

Avg of A, B = 40, $40 \times 2 = 80$.

Avg of B, C = 43, $43 \times 2 = 86$.

C = 135 − (A + B) = 135 − 80 = 55

B = 138

B + C = 86, B = 86 − 55 = 31

d

i- 1, 2, 3, 6, 4, 5, 20, ?, 3, 18

Missing number is 6.

2 × 3 = 6, 4 × 5 = 20, ? × 3 = 18

? = 18/3 = 6.

ii 1, 3, 9, 15, 25, ?, 49.

Missing number is 35

$1^2 = 1$, 1 × 3 = 3, $3^2 = 9$, 3 × 5, 15, $5^2 = 25$

7 × 5 = 35, $7^2 = 49$.

Pattern is 1 sq of 1st num, mult. of no. with next odd, then sq of last and so on.

iii 2, 7, 10, 22, 18, 37, 26, ?

Odd term pattern, difference of 8

Even term pattern, difference of 15

37 + 15 = 52.

iv 34, 7, 37, 14, 40, 28, 43, ___

Odd term diff is of 3, even terms are multiple of 2, 28 × 2 = 56.

V- 5, 7, 11, ___, 17, 19

13,

All other numbers are prime, so missing number is 13.