Talat Fatima   Online Test Batch

GSA — Test 3.

Question No. 01:

a) Let the three conseective numbers

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

$a_3 = a_2 + 2$.

$a_1 + a_1 + 2 + a_1 + 3 = 97$

$\Rightarrow 3a_1 + 4 = 97$

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

Let the Prime no.s near 31 are 29

35 and 37

$29 + 31 + 35 = 95$ ✗

$29 + 31 + 37 = 97$ ✓

So, the correct and ~~soo~~ 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 numbers to be even is 75%

d) If the month begins on Sunday.
Total sunday $= 5$
Other days $= 25$
Visits on sunday $= 5 \times 510 = 2550$
Visits on other days $= 240 \times 25 = 6000$
Total visitors in a month $= 2550 + 6000$
$$= 8550$$
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 no's $3u$ and $5u$.

$3u-9$ and $5u-9 =$ New no's

New ration $12:23$.

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

POM = POE

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

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

$9u = 99 \qquad u = 11$

So, no's are $3u \& 5u = 33$ 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 $= 43$, $43 \times 2 = 86$.

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$C = 135 - (A+B) \quad = 135 - 80 = 55$

$B = 138 -$

$B + C = 86 \quad , \quad B = 86 - 55 = 31$

d

i- $\bullet, 2, 3, 6, 4, 5, 20, ?, 3, 18$

Missing number is 6

$2 \times 3 = 6, \quad 4 \times 5 = 20 \quad , \qquad ? \times 3 = 18$

$? = 18/3 = 6$

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

Missing number is 35

$1^2 = 1, \quad 1 \times 3 = 3, \quad 3^2 = 9, \quad 3 \times 5, 15, \quad 5^2 = 25$

$7 \times 5 = 35, \quad 7^2 = 49$

Pattern is sq of 1st num , mult. of no. with

8 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 , $28 \times 2 = 56$

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

    13,

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

(5)