Date: GSA-03 M T W T F S

Question no: 03

Part (a):

Given data:

A can do work in = 15 days

B can do work in = 20 days

both can do work in = $\frac{1}{15} + \frac{1}{20}$

$= \frac{4+3}{60}$

Total work done by both A and B $= \frac{7}{60}$

If both work together for $= \frac{7}{60} \times 4$

$= \frac{28}{60} \Rightarrow \frac{7}{15}$

Total work done is $= \frac{7}{15}$

Fraction of work left behind is $= 1 - \frac{7}{15}$

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

Fraction of work left behind $= \frac{8}{15}$

Date: M T W T F S

Part (b):

Let the two numbers 'x' are in the ratio = $3x : 5x$

If 9 is subtracted from each:

$3x - 9 \quad 3x - 9 : 5x - 9 = 12 : 23$

$$\frac{3x-9}{5x-9} = \frac{12}{23}$$

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

$$60x - 108 = 69x - 207$$

$$69x - 60x = 207 - 108$$

$$9x = 99$$

$$x = \frac{99}{9} \Rightarrow 11$$

Smaller number is: $3x$

$3(11) = \underline{33}$.

Part (c):

Average weight of A, B, C = 45kg

$$\frac{A+B+C}{3} = 45$$

$$A+B+C = 45 \times 3 \Rightarrow 135\text{kg} \quad \text{--eq (1)}$$

Average weight of A and B = 40 kg

Date: _____ M T W T F S

$\frac{A+B}{2} = 40kg$

$A+B = 40 \times 2 \Rightarrow 80kg$ ——eq②

Average weight of B and C = 43kg

$\frac{B+C}{2} = 43kg$

$B+C = 43 \times 2 \Rightarrow 86kg$ —eq③

From eq (1)

$A + B + C = 135kg$

putting value of B+C in abave eq,

$A + 86 = 135$

$A = 135 - 86$

$A = 49kg$

Now, putting the value of A in eq ②

$A + B = 80kg$

$49 + B = 80$

$B = 80 - 49$

$B = 31kg$

Weight of B is 31kg.

Part (d) :

1. $2, 3, 6, 4, 5, 20, \_\_\_, 3, 18$ (×, ×, ×)

For the above sequence, the pattern

Date: _____ M T W T F S

involves that every third term is product of the first two terms.

Where $2 \times 3 = 6$

$4 \times 5 = 20$

$\_ \times 3 = 18$

So, possible number to get 18 is **6.**

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

+3 +6 +10

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

two number series mentioned above;

2, 10, 18, 26, ____ (+8 +8 +8)

7, 22, 37, ____ (+15 +15)

In first series, every number increases by 8, and in 2nd series, every number increases by 15 units. Following this pattern, next number will be: _____ ?

$37 + 15 = 52$ (+3 +3)

4. 34, 37, 37, 14, 40, 28, 43, ____ (+3 ×2 ×2 ×2)

$28 \times 2 = 56$.

Missing number is 56.

Date: _____ M T W T F S

5. 5, 7, 11, ___, 17, 19

+2 +4 +2

Missing number 11+2 => 13

3

Question no: 01

Part (b):

Statement:

He is the son of the daughter of the father of my uncle.

daughter — Father of my uncle

↓ ↓

Aunt Grandfather

↓

Son (Cousin)

So, boy is the cousin of the girl.

5

Part (d):

If a month starts with a Sunday, total 5 sundays will be in a month.

Total visitors on Sunday in a month = 510 x 5 = 2550 visitors

Date: M T W T F S

Rest of the days = 30 - 5 = 25 days

Visitors on the days = 25 × 240
= 6000 visitors

Total visitors in a month = 6000 + 2550
= 8550

Number of visitors per day = $\frac{8550}{30}$ $\frac{285}{}$

= 285 visitors !

5

Part (a) :

Sum of three consecutive prime number = 97

three consecutive numbers = $x + x + x = 97$

$3x = 97$

$x = \frac{97}{3}$

$x = 31.5 \approx 32$

So prime numbers near 32 can be the possible numbers.

Prime numbers near 32 are 29, 31, 37.

$29 + 31 + 37 = 97$

5

So, 29, 31, 37 are the three consecutive prime numbers whose sum is 97.