

Date: _____

Day: _____

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RMS ID:- 43600

BATCH:- 003

SUBJECT:- General Science & Ability



QUESTION:- 1

(A). Sum of three consecutive ... ?

GIVEN DATA:-

sum of three consecutive ^{prime} numbers = 97

Find Numbers:-

x_1, x_2 and $x_3 = ?$

Solution:-

Let three consecutive prime numbers
are x_1, x_2, x_3 .

$$x_1 + x_2 + x_3 = 97$$

The prime numbers are 2, 3, 5, 7,

11, 13, 17, 19, 23, 29, 31, 37, 39, 41,

So the three numbers can

be 29, 31, 37.

$$29 + 31 + 37 = 97$$

So, the three consecutive numbers are 29, 31, 37.



(B). Introducing a boy - ... ?

Solution:-

"He is the son of the daughter of the father of my uncle."
Girl said.

OF My Uncle = Girl's Uncle
Father of Girl's Uncle = Girl's Grandfather
Daughter of Girl's grandfather = Girl's Aunt
Son of Girl's Aunt = Girl's cousin.

The boy is related to girl as "Cousin."

Date: _____

Day: _____

c). Two dice are thrown ... ?

GIVEN DATA:-

Two dice are rolled simultaneously.

Find DATA:-

Probability of getting two numbers whose product is even-

Solution:-

The possible events can be after rolling two dice simultaneously = $(1,1), (1,2), (1,3), (1,4), (1,5), (1,6), (2,1), (2,2), (2,3), (2,4), (2,5), (2,6), (3,1), (3,2), (3,3), (3,4), (3,5), (3,6), (4,1), (4,2), (4,3), (4,4), (4,5), (4,6), (5,1), (5,2), (5,3), (5,4), (5,5), (5,6), (6,1), (6,2), (6,3), (6,4), (6,5), (6,6)$.

Getting two numbers = $(1,2), (1,4), (1,6), (2,2), (2,1), (2,3), (2,4), (2,5), (2,6), (3,2), (3,4), (3,6), (4,1), (4,2), (4,3), (4,4), (4,5), (4,6), (5,2), (5,4), (5,6), (6,1), (6,2), (6,3), (6,4), (6,5), (6,6)$

Date: _____

Day: _____

Probability = $\frac{\text{Getting product of even}}{\text{Possible number of event.}}$

$$= \frac{27}{36} = \frac{3}{4}$$

(D). A library has an average
of 510 — — — ?

1st, 8, 15, 22, 29
sunday

GIVEN DATA:-

Library has average visitors on sunday = 510

Library has average visitors on other days = 240

To Find:-

Average number of visitors per day in month
of 30 days beginning with Sunday = ?

Solution:-

Number of Sundays in 30 days = 5 days

Number of other days in 30 days = 25 days.

Number of visitors on Sundays

in 30 days = 5×510

= 2550 visitors

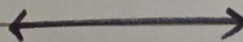
Date: _____

Day: _____

Number of visitors on other days
in 30 days = 240×25
= 6000 visitors

Average numbers of visitors in = $\frac{\text{Total Number of visitors}}{\text{Number of days}}$
30 days
= $\frac{2550 + 6000}{30}$
= $\frac{8550}{30}$
= 285 visitors

Average number of visitors
per day in month of
30 days beginning with
Sunday is 285 visitors.



Date: _____

Day: _____

QUESTION:- 3

A. A can do work in
15 days - - - ?

Solution:-

$$\text{Total work} = \frac{1}{A} + \frac{1}{B}$$

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

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

$$= \frac{7}{60}$$

They worked together for 4 days

$$= \frac{7}{60} \times 4 = \frac{7}{15}$$

$$\text{The work left} = 1 - \frac{7}{15} = \frac{15-7}{15}$$

$$\text{Work Left} = \frac{8}{15}$$

Date: _____

Day: _____

B. Two numbers are in ratio...?

GIVEN DATA:-

Let two numbers are x and y

$$\frac{x}{y} = \frac{3}{5} \rightarrow (i)$$

$$\frac{x-9}{y-9} = \frac{12}{23} \rightarrow (ii)$$

$$\frac{x-9}{y-9} = \frac{12}{23}$$

$$\frac{x-9}{y-9} = \frac{12}{23}$$

To Find:-

Smaller Number is ?

Solution:-

$$\Rightarrow x = \frac{3}{5}y \quad y \rightarrow (ii) \text{ (Put in eq (ii))}$$

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

$$\frac{y - 9}{3y - 45} = \frac{12}{23}$$

$$\frac{y - 9}{3y - 45} = \frac{12}{23}$$

$$\frac{y - 9}{3y - 45} = \frac{12}{23}$$

$$23(y - 9) = 12(3y - 45)$$

$$\frac{69y - 1035}{5} = 12y - 108$$

$$69y - 1035 = 60y - 540$$

$$69y - 60y = 1035 - 540$$

$$9y = 495$$

$$y = \frac{495}{9}$$

$$y = 55$$

put in eq (ii)

$$x = \frac{3}{5}(55)$$

$$x = 33$$

The smaller number is 33.

(c). $\longleftrightarrow$ The average weight of A, B...?

GIVEN DATA—

Average weight of A, B, C = 45 kg

Average weight of A, B = 40 kg

Average weight of B, C = 43 kg

Date: _____

Day: _____

To Find:-

Weight of B = ?

Solution:-

$$\text{Average (A, B \& C)} = 45 \text{ kg}$$

$$\text{Average (A \& B)} = 40 \text{ kg}$$

$$\text{Average (B \& C)} = 43 \text{ kg}$$

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

$$3$$

$$A+B+C = 135 \text{ kg} \rightarrow (i)$$

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

$$2$$

$$A+B = 80 \text{ kg} \rightarrow (ii)$$

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

$$2$$

$$B+C = 86 \text{ kg} \rightarrow (iii)$$

$$A = 80 - B \rightarrow (iv)$$

$$B = 86 - C \rightarrow (v) \quad \text{put in eq (i)}$$

$$80 - 86 + C + 86 - C + C = 135$$

$$80 + C = 135$$

$$C = 55 \text{ kg}$$

put in eq (iii)

$$B = 86 - C = 86 - 55$$

$$B = 31 \text{ kg}$$

$$A = 80 - B$$

$$= 80 - 31$$

$$A = 49 \text{ kg}$$

The weight of B is 31 kg



D. Find the missing terms—

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

2. 1, 3, 9, 15, 25, 35, 49.

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

4. 34, 7, 37, 14, 40, 28, 43, 56.

5. 5, 7, 11, 13, 17, 19