

Date: _____

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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.

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$$29 + 31 + 37 = 97$$

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."

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),

whose product is even (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)

Probability

Getting product of even
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 v—

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

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

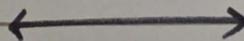
Average number of visitors in 30 days = $\frac{\text{Total Number of visitors}}{\text{Number of days}}$

$$= \frac{2550 + 6000}{30}$$

$$= \frac{8550}{30}$$

$$= 285 \text{ visitors}$$

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



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

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

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

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

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B. Two numbers are in ratio...?

GIVEN DATA:-

Let two numbers are x and y

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

$$y = 23$$

$$x - 9 = \frac{12}{5} \rightarrow (ii)$$

$$y - 9 = 23$$

To Find:-

Smaller Number is ?

Solution:-

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

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

$$\frac{y - 9}{5} = \frac{23}{5}$$

$$\frac{3y - 45}{5} = \frac{12}{5}$$

$$y - 9 = 23$$

$$23 \left(\frac{3y - 45}{5} \right) = 12(y - 9)$$

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

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

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

$$9y = 495$$

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

$$y = 55$$

put in eq (ii)

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

$$x = 33$$

The smaller number is 33.

(c). 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

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

