

TALAL YOUSAF

GSA

DATE: / /

SECTION II

Q6:-

Part A:-

First we will calculate the volume

$$\text{Volume} = \text{length} \times \text{Breadth} \times \text{Depth}$$

$$\text{Volume} = 300 \text{ cm} \times 200 \text{ cm} \times 1 \text{ cm}$$

$$\boxed{\text{Volume} = 60,000 \text{ cm}^3}$$

As density $= \rho = \frac{m}{V} = \rho \times V = m$ eq (1)

here $\rho =$ density of water

which $= 1 \text{ g/cm}^3$ • putting in eq (1)

$$\text{so } = 1 \frac{\text{g}}{\text{cm}^3} \times 60,000 \text{ cm}^3 = m$$

$$\text{so } m = 60,000 \text{ g}$$

$$\boxed{m = 60 \text{ kg}}$$

As it is when the man sink the water is displaced so mass of = mass of displaced water man
so Mass of man = 60 kg Ans

DATE: / /

Q 23

Solution:-

$$= \text{Selling price of 17 balls} = 720 \text{ Rs [eq (1)]}$$

$$= \text{Loss} = \text{cost price of 5 balls} \text{ - [eq (2)]}$$

Let the cost of one ball = x

So eq (1) & (2) would be

$$\text{Selling price of 17 balls} = 17x = 720 \text{ Rs}$$

& eq (2)

$$\text{cost price of 5 balls} = 5x = \text{Loss - eq (3)}$$

and

$$\text{Loss} = \text{Cost price} - \text{Selling price}$$

$$\text{Here Loss} = 5x \text{ [from - eq (3)]}$$

$$5x = \text{Cost price} - 720 \text{ Rs of 17 balls}$$

$$5x = 17x - 720 \text{ Rs}$$

$$720 = 17x - 5x$$

$$720 \text{ Rs} = 12x$$

DATE: / /

$$\boxed{x = 60 \text{ Rs}}$$

So cost of one ball

$$= 60 \text{ Rs}$$

and cost of 17 balls would be

$$= 17x = 17(60) = 1020$$

and cost of 5 balls = $5x = 5(60) = \underline{300}$

So C.O.P = 1020 Rs

S.O.P = 720 Rs

Loss = 300 Rs

Verified

Part C
let

Age of man = x
Age of son = y

Presently

$$x = y + 24 \quad \text{--- eq ①}$$

After 2 year.

$$2 + x = 2(y + 2)$$

$$x + 2 = 2y + 4$$

$$x = 2y + 2 \quad \text{--- eq ②}$$

Comparing eq ① & eq ②

$$y + 24 = 2y + 2$$

$$22 = y$$

So the present age of son = 22 and of father is 46.

After 2 years, $x = 48$, $y = 24$.

Ans

DATE: / /

Paul D.

Rashid

$$\text{takes} = 6x = 32 \text{ pages}$$

$$x = 5.33 \text{ pages/hour}$$

$$\text{Kamran takes} = 5y = 40 \text{ pages}$$

$$y = 8 \text{ pages/hour}$$

$$\text{Both Kamran \& Rashid} = x + y$$

$$= (5.33 + 8) \text{ pages/hour}$$

$$= 13.33 \text{ pages/hour}$$

Whereas.

$$\text{Assignment} = \boxed{110 \text{ pages}}$$

$$30 \text{ hours would be} = \text{Total pages}$$

$$(x + y) \text{ pages/hour}$$

$$= \frac{110 \text{ pages}}{13.33 \text{ pages/hour}}$$

$$8.25 \text{ hours}$$

$$\text{Time required} = 8.25 \text{ hours}$$

Answer.

DATE: / /

Q No. 7)

Q

As the formula of simple interest

$$S.I = P \times R \times T$$

$$\text{Simple interest} = \left(\frac{\text{Principle} \times \text{Rate} \times \text{Time}}{\text{Amount}} \right) / 100$$

So putting values

$$S.I = 432$$

$$P = 1200$$

$$= 432 = \left(\frac{1200 \times R \times T}{100} \right)$$

Let $R = x$, also $T = x$

$$432 = \left(\frac{1200 \times x^2}{100} \right)$$

$$432 = 12x^2$$

$$x^2 = 36$$

$$x = 6$$

So $R = 6\%$, $T = 6$ years

Ans

B)

Avg Visitors on Sunday = 510 visitor/day
 Avg visitors on other days = 240 visitor/day

Total days = 30

As per condition the month starts with Sunday
 so in 5 Sunday will occur
 in Monday

Total composition of days = 5 Sundays + 25 other day

Putting values

$$\text{Total visitors} = (5 \times 510) + (25 \times 240)$$

$$= 2550 + 6000$$

$$= 8550 \text{ visitors/month}$$

and for per day, driver
 with 30, we have.

$$\text{Avg for one day} = \frac{8550}{30} = 285 \text{ visitor/day}$$

Ans

DATE 1/1

Q:- let one number = x & other number = y

As per condition

$$-(40\%) (x) = \left(\frac{2}{3}\right) y$$

$$= \frac{40}{100} x = \frac{2}{3} y$$

$$= \frac{4}{10} x = \frac{2}{3} y$$

$$= \frac{3}{10} = \frac{2y}{4x}$$

$$= \frac{3}{10} = \frac{y}{2x}$$

$$= \frac{3 \times 2}{10} = \frac{y}{x}$$

$$= \frac{6}{10} = \frac{y}{x}$$

$$= 6:10 = y:x \Rightarrow 3:5$$

or $\boxed{10:6 = x:y}$ $\boxed{\text{Ans}}$

D*

Two dices mean = $\frac{1 \times 1}{6 \times 6}$

Total probability of outcomes = $\frac{1}{36}$

∴ Dice have following six numbers = 1, 2, 3, 4, 5, 6
three even, three odd
and

even numbers when ^{multi} applied with any natural number will get even number.

$$\text{So } [2, 4, 6] = \frac{4 \times 3}{6 \times 3} = \frac{12}{18} \quad \text{--- eq (1)}$$

Whereas odd number when multiplied with even number can get even answer

$$\text{So } [1, 3, 5] = \frac{3 \times 3}{6 \times 3} = \frac{9}{18} \quad \text{--- eq (2)}$$

combining eq (1) & (2)

$$= 12 + 9 = 21$$

DATE: / /

So 27 outcomes will
be even ones out
of 36 possible.

$$\text{So} = \text{Probability} = \frac{27}{36}$$

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

$$= 0.75$$

or 75% chance to

get even number

39