

General Science and Ability
Mock-1
Part-II

Section-II

Q No 7 (a)

The sum of two numbers is 23, and product is 132. Find the numbers.

Solution:

let a Number is x
and other number is y

So As per given conditions:-

$$x + y = 23 \quad \text{--- ①}$$

$$xy = 132 \quad \text{--- ②}$$

From eq ①

$$x + y = 23$$

$$x = 23 - y \rightarrow \text{put this}$$

Value of ' x ' in eq (2)

$$xy = 132$$

$$(23 - y)y = 132$$

$$23y - y^2 = 132$$

$$23y - y^2 - 132 = 0$$

$$-y^2 + 23y - 132 = 0$$

$$-y^2 + 15y + 9y - 132 = 0$$

$$-y(y-15) + 9(y-15) = 0$$

$$(y-15)(-y+9) = 0$$

$$(y-15)(-y+9) = 0$$

$$y-15=0$$

$$-y+9=0$$

$$y=15$$

$$y=9$$

Putting $y=15$ in eq (1)

$$x+y = 23$$

$$x+15 = 23$$

$$x = 23 - 15 = 9$$

$$x=9$$

So $x=9$ $y=15$

one Number 9 and other is 15.

Q7 (b)

40% of a No is more than 20% of 650 by 190. Find the No.

Solution: let the number is x

$$\frac{40}{100} \times x = \left[\frac{20}{100} \times 650 \right] + 190$$

$$\frac{40x}{100} = \left[\frac{20 \times 650}{100} \right] + 190$$

$$x = 130 \times \frac{100}{40} + 190$$

$$x = 325 + 190$$

$$x = 515$$

Q7 (c)
A man buys a car for Rs 70 million after getting discount of 20%. What was marked price of car?

Solution:

After discount Cost price of car = 70 million PKR

Let marked price of car is x

Then 80% of $x = 70$ million PKR

$$\frac{80}{100} \times x = 70 \text{ million PKR}$$

$$x = \frac{70 \times 100}{80}$$

$$x = 87.5 \text{ million}$$

So marked price of car = 87.5 million.

Q7 (d)

A no is increased by 10% and decreased by 10%. The net change in the Number is?

Solution: Let the Number is 20

10% of 20 is increase in Number by 10%.

$$\text{So } 20 + \frac{10}{100} \times 20 = 20 + 2$$

Then it will be 22

After 10% decrease

$$22 - \frac{10}{100} \times 22 = 22 - 2.2$$

The number become = 19.8

$$\begin{aligned} \text{The net Change} &= 20 - 19.8 \\ &= 0.2 \end{aligned}$$

0.2 is 1% of 20

The net Change in number
will be 1%.

Q.6 (a)

The sum of three consecutive
prime numbers is 159.

Find the numbers.

Solution: Suppose

Three consecutive prime
Numbers are

x , y and z .

$$x + y + z = 159$$

let $x = 47$ then

$$y = 53 \quad z = 59$$

$$\text{So } 47 + 53 + 59 = 159$$

Q.6(b)

The perimeter of a circle having a radius 6cm is equal to?

Solution: $r = 6\text{cm}$
The circumference of a circle = $2\pi r$
So $= 2 \times \frac{22}{7} \times 6$
 $= 37.7\text{cm}$

Q No 6 (C)

Find the present age of a man when the average age of man, wife and their child is 3 years ago was 27 and that of wife and the child 5 years ago was 20 years.

Solution:

let age of man = x

age of wife = y

age of child = z

3 years ago

$$\frac{x+y+z}{3} = 27$$

$$x+y+z = 81 \quad \text{--- (1)}$$

→ 5 years ago

$$\frac{y+z}{2} = 20$$

$$y+z = 40$$

Now:-

$$y+z = 50$$

$$3 \text{ years ago: } x+y+z = 81$$

$$\text{Now: } x+y+z = 90$$

$$\text{Now So } x+y+z = 90 \text{ and}$$

$$y+z = 50$$

$$\text{then } x+50 = 90$$

$$x = 90 - 50$$

$$x = 40$$

The present age of
man is 40 years.

Q6 (d)
Solution: let the three numbers
are x , y and z then

$$x + y + z = 98$$

$$x : y = 2 : 3$$

$$y : z = 5 : 8$$

$$y = ?$$

$$x : y : z$$

$$2 : 3 : 3$$

$$5 : 5 : 8$$

$$10 : 15 : 24$$

As per Condition

$$x + y + z = 98$$

then $10 : 15 : 24$ is

got by $20 : 30 : 48$

So

$$20 + 30 + 48 = 98$$

$$y = 30$$

Second Number is 30.