



### Exercise 3E

Question 3:

Let the number of 20 P and 25 P coins be  $x$  and  $y$  respectively

Total number of coins  $x + y = 50$

i.e.,  $x + y = 50$  ---(1)

Value of these coins = Rs  $\left(\frac{x}{5} + \frac{y}{4}\right)$  = Rs 11.50 = Rs  $11\frac{1}{2}$

$$\therefore \frac{x}{5} + \frac{y}{4} = \frac{23}{2}$$

$$\Rightarrow 4x + 5y = 230 \text{ --- (2)}$$

Multiplying (1) by 5 and (2) by 1, we get

$$5x + 5y = 250 \text{ ---(3)}$$

$$4x + 5y = 230 \text{ ---(4)}$$

Subtracting (4) from (3), we get

$$x = 20$$

Putting  $x = 20$  in (1),

$$y = 50 - x$$

$$= 50 - 20$$

$$= 30$$

Hence, number of 20 P coins = 20 and number of 25 P coins = 30

Question 4:

Let the two numbers be  $x$  and  $y$  respectively.

Given:

$$x + y = 137 \text{ ---(1)}$$

$$x - y = 43 \text{ ---(2)}$$

Adding (1) and (2), we get

$$2x = 180$$

$$x = 180/2 = 90$$

Putting  $x = 90$  in (1), we get

$$90 + y = 137$$

$$y = 137 - 90$$

$$= 47$$

Hence, the two numbers are 90 and 47.

Question 5:

Let the first and second number be  $x$  and  $y$  respectively.

According to the question:

$$2x + 3y = 92 \text{ ---(1)}$$

$$4x - 7y = 2 \text{ ---(2)}$$

Multiplying (1) by 7 and (2) by 3, we get

$$14x + 21y = 644 \text{ ---(3)}$$

$$12x - 21y = 6 \text{ ---(4)}$$

Adding (3) and (4), we get

$$26x = 650$$

$$x = 650/26 = 25$$

Putting  $x = 25$  in (1), we get

$$2 \times 25 + 3y = 92$$

$$50 + 3y = 92$$

$$3y = 92 - 50$$

$$y = 42/3 = 14$$

$$y = 14$$

\*\*\*\*\*END\*\*\*\*\*