Pair of Linear Equations in Two varibles Ex 3.11 Q18

Answer :

Let $Rs.\ x$ be the notes of $Rs.\ 50$ and $Rs.\ 100$ notes will be $Rs.\ y$

If Meena ask for $Rs.50$ and $Rs.100$ notes only, then the equation will be,

$50x+100y=2000$

Divide both sides by 50 then we get,

$x+2y=40\ \cdots(i)$

If Meena got 25 notes in all then the equation will be,

$x+y=25\ \cdots(ii)$

By subtracting the equation (ii) from (i) we get,

$$x+2y=40$$
$$\underline{-x-y=-25}$$
$$1y=15$$
$$y=\frac{15}{1}$$
$$y=15$$

Substituting $y=15$ in equation (ii), we get

$$x+y=25$$
$$x+15=25$$
$$x=25-15$$
$$x=10$$

Therefore $x=10$ and $y=15$

Hence, Meena has $\boxed{10}$ notes of $Rs.\ 50$ and $\boxed{15}$ notes of $Rs.\ 100$

Pair of Linear Equations in Two varibles Ex 3.11 Q19

Answer :

Let take right answer will be x and wrong answer will be y.

Hence total number of questions will be $x+y\ \cdots(i)$

If yash scored 40 marks in atleast getting 3 marks for each right answer and losing 1 mark for each wrong answer then

$3x-1y=40\ \cdots(ii)$

If 4 marks awarded for each right answer and 2 marks deduced for each wrong answer the he scored 50 marks

$4x-2y=50\ \cdots(iii)$

By multiplying equation (i) by 2 we get

$6x-2y=80\ \cdots(iv)$

By subtracting (iii) from (iv) we get

$$6x-\cancel{2y}=80$$
$$\underline{-4x+\cancel{2y}=-50}$$
$$2x=30$$
$$x=\frac{30}{2}$$
$$x=15$$

Putting $x=15$ in equation (ii) we have

$$3x-1y=40$$
$$3\times15-1y=40$$
$$45-1y=40$$
$$-1y=40-45$$
$$\not{-}y=\not{-}5$$

Total number question will be

$$=x+y$$
$$=15+5$$
$$=20$$

Hence, the total number of question is $\boxed{20}$.

********** END **********