Linear Equations in One Variable Ex 9.4 Q11

Answer :

Let the age of Ashima be x years.
Therefore, the age of Sunita will be 2x years.
According to the question,

$$4(x-6) = 2x+4$$
$$\text{or } 4x-24 = 2x+4$$
$$\text{or } 4x-2x = 4+24$$
$$\text{or } 2x = 28$$
$$\text{or } x = 14$$
$$\therefore \text{ Age of Ashima } = 14 \text{ years.}$$
$$\text{Age of Sunita } = 2\times 14 = 28 \text{ years.}$$

Linear Equations in One Variable Ex 9.4 Q12

Answer :

It is given that the ratio of the ages of Sonu and Monu is $7:5$.
Let the present ages of Sonu and Monu be $7x$ and $5x$ years.
After ten years :
Age of Sonu $= 7x + 10$ years
Age of Monu $= 5x + 10$ years
According to the question,

$$\frac{7x+10}{5x+10} = \frac{9}{7}$$
$$\text{or } 49x + 70 = 45x + 90$$
$$\text{or } 49x - 45x = 90 - 70$$
$$\text{or } 4x = 20$$
$$\text{or } x = 5$$
$$\therefore \text{ Present age of Sonu } = 7\times 5 = 35 \text{ years.}$$
$$\text{Present age of Monu } = 5\times 5 = 25 \text{ years.}$$

Linear Equations in One Variable Ex 9.4 Q13

Answer :

Five years ago :
Let the age of the son be x years.
Therefore, the age of the father will be $7x$ years.
$\therefore$ Present age of the son $= (x + 5)$ years
Present age of the father $= (7x + 5)$ years
After five years :
Age of the son $= (x + 5 + 5) = (x + 10)$ years
Age of the father $= (7x + 5 + 5) = (7x + 10)$ years
According to the question,
$7x + 10 = 3(x + 10)$
or $7x - 3x = 30 - 10$
or $4x = 20$
or $x = 5$
$\therefore$ Present age of the son $= (5 + 5) = 10$ years.
Present age of the father $= (7 \times 5 + 5) = 40$ years.

Linear Equations in One Variable Ex 9.4 Q14

Answer :

Let the age of my son be x years.
Therefore, my age will be $5x$ years.
After 6 years :
Age of my son $= (x + 6)$ years
My age $= (5x + 6)$ years
According to the question,
$5x + 6 = 3(x + 6)$
or $5x - 3x = 18 - 6$
or $2x = 12$
or $x = 6$
$\therefore$ Age of my son $= 6$ years.
My age $= 5 \times 6 = 30$ years.

Linear Equations in One Variable Ex 9.4 Q15

Answer :

Let the number of five – rupee notes be x.

Therefore, the number of ten – rupee notes will be $\left(x+10\right)$.

Now,

Value of five – rupee notes = Rs. $5x$

Value of ten – rupee notes = Rs. $10\left(x+10\right)$

According to the question,

$5x + 10\left(x + 10\right) = 1000$

or $15x = 1000 - 100$

or $x = \frac{900}{15} = 60$

$\therefore$ Number of five – rupee notes $= 60$.

Number of ten – rupee notes $= 60 + 10 = 70$.

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