Exercise 9C

Q18

Answer :

Let the present age of Rahim be x years.
After 32 years:
Rahim's age = (x + 32) years
8 years ago:
Rahim's age = (x − 8) years
According to the question:
x + 32 = 5(x − 8)
or, x + 32 = 5x − 5×8
or, x + 32 = 5x − 40
or, 40 + 32 = 5x − x [Transposing 'x' to the R.H.S. and 40 to the L.H.S.]
or, 72 = 4x
or, $\frac{4x}{4} = \frac{72}{4}$ [Dividing both the sides by 4]
or, x = 18
Thus, the present age of Rahim is 18 years.

Q19

Answer :

Let the number of 50 paisa coins be x.
Then, the number of 25 paisa coins will be 4x.
According to the question:
0.50(x) + 0.25(4x) = 30
or, 0.5x + x = 30
or, 1.5x = 30
or, $\frac{1.5x}{1.5} = \frac{30}{1.5}$ [Dividing both the sides by 1.5]
or, x = 20
Thus, the number of 50 paisa coins is 20.
Number of 25 paisa coins = 4x = 4×20 = 80

Q20

Answer :

Let the price of one pen be Rs x.
According to the question:
5x = 3x + 17
or, 5x − 3x = 17 [Transposing 3x to the L.H.S.]
or, 2x = 17
or, $\frac{2x}{2} = \frac{17}{2}$ [Dividing both the sides by 2]
or, x = 8.50
∴ Price of one pen = Rs 8.50

Q21

Answer :

Let the number of girls in the school be x.
Then, the number of boys in the school will be (x + 334).
Total strength of the school = 572

∴ x + (x + 334) = 572
or, 2x + 334 = 572
or, 2x + 334 − 334 = 572 − 334 {Subtracting 334 from both the sides]
or, 2x = 238
or, $\frac{2x}{2} = \frac{238}{2}$ [Dividing both the sides by 2]
or, x = 119
∴ Number of girls in the school = 119

Q22

Answer :

Let the breadth of the park be x metres.
Then, the length of the park will be 3x metres.
Perimeter of the park = 2 (Length + Breadth) = 2 (3x + x) m
Given perimeter = 168 m

∴ 2(3x + x) = 168
or, 2 (4x) = 168
or, 8x = 168 [On expanding the brackets]
or, $\frac{8x}{8} = \frac{168}{8}$ [Dividing both the sides by 8]
or, x = 21 m
∴ Breadth of the park = x = **21 m**
Length of the park = 3x = 3×21 = **63 m**

Q23

Answer :

Let the breadth of the hall be x metres.
Then, the length of the hall will be (x + 5) metres.
Perimeter of the hall = 2(Length + Breadth) = 2(x + 5 + x) metres
Given perimeter of the rectangular hall = 74 metres

∴ 2(x + 5 + x) = 74
or, 2 (2x + 5) = 74
or, 2 ×2x + 2 ×5 = 74 [On expanding the brackets]
or, 4x + 10 = 74
or, 4x + 10 − 10 = 74 − 10 [Subtracting 10 from both the sides]
or, 4x = 64
or, $\frac{4x}{4} = \frac{64}{4}$ [Dividing both the sides by 4]
or, x = 16 metres
∴ Breadth of the park = x
= **16 metres**
Length of the park = x + 5 = 16 + 5
= **21 metres**

Q24

Answer :

Let the breadth of the rectangle be x cm.
Then, the length of the rectangle will be (x + 7) cm.
Perimeter of the rectangle = 2(Length + Breadth) = 2(x + 7 + x) cm
Given perimeter of the rectangle = Length of the wire = 86 cm

∴ 2(x + 7 + x) = 86
or, 2 (2x + 7) = 86
or, 2 ×2x + 2 × 7 = 86 [On expanding the brackets]
or, 4x + 14 = 86
or, 4x + 14 - 14 = 86 - 14 [Subtracting 14 from both the sides]
or, 4x = 72
or, $\frac{4x}{4} = \frac{72}{4}$ [Dividing by 4 on both the sides]
or, x = 18 metres
Breadth of the hall = x
= **18 metres**
Length of the hall = x + 7
= 18 + 7
= **25 metres**

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