



Exercise 7C

Q1

Answer :

$$(d) \frac{1}{36}$$

We have:

$$5x - \frac{3}{4} = 2x - \frac{2}{3}$$

$$\Rightarrow 5x - 2x = \frac{-2}{3} + \frac{3}{4}$$

$$\Rightarrow 3x = \frac{-8+9}{12}$$

$$\Rightarrow x = \frac{1}{12 \times 3}$$

$$\Rightarrow x = \frac{1}{36}$$

Q2

Answer :

$$(d) \frac{4}{3}$$

We have:

$$\frac{2}{3} + \frac{1}{2} = \frac{4}{6} + \frac{3}{6} = \frac{7}{6}$$

$$2z + \frac{8}{3} = \frac{1}{4}z + 5$$

$$\Rightarrow 2z - \frac{1}{4}z = 5 - \frac{8}{3}$$

$$\Rightarrow \frac{8z - z}{4} = \frac{15 - 8}{3}$$

$$\Rightarrow \frac{7z}{4} = \frac{7}{3}$$

$$\Rightarrow z = \frac{7^1 \times 4}{3 \times 7_1}$$

$$\Rightarrow z = \frac{4}{3}$$

Q3

Answer :

(a) 5

We have:

$$(2n + 5) = 3(3n - 10)$$

$$\Rightarrow 2n + 5 = 9n - 30$$

$$\Rightarrow 2n - 9n = -30 - 5$$

$$\Rightarrow \cancel{7}n = \cancel{35}$$

$$\Rightarrow n = \frac{\cancel{35}^5}{\cancel{7}_1}$$

$$\Rightarrow n = 5$$

Q4

Answer :

(c) 8

We have:

$$\frac{x-1}{x+1} = \frac{7}{9}$$

$$\Rightarrow 9(x-1) = 7(x+1)$$

$$\Rightarrow 9x - 9 = 7x + 7$$

$$\Rightarrow 9x - 7x = 7 + 9$$

$$\Rightarrow 2x = 16$$

$$\Rightarrow x = \frac{16}{2}$$

$$\Rightarrow x = 8$$

Q5

Answer :

$$(c) \frac{1}{2}$$

We have:

$$8(2x-5) - 6(3x-7) = 1$$

$$\Rightarrow 16x - 40 - 18x + 42 = 1$$

$$\Rightarrow -2x + 2 = 1$$

$$\Rightarrow -2x = 1 - 2$$

$$\Rightarrow x = \frac{1}{2}$$

$$\Rightarrow x = \frac{1}{2}$$

Q6

Answer :

(d) 30

We have:

$$\frac{x}{2} - 1 = \frac{x}{3} + 4$$

$$\Rightarrow \frac{x-2}{2} = \frac{x+12}{3}$$

$$\Rightarrow 3(x-2) = 2(x+12)$$

$$\Rightarrow 3x - 6 = 2x + 24$$

$$\Rightarrow 3x - 2x = 24 + 6$$

$$\Rightarrow x = 30$$

Q7

Answer :

(a) 2

We have:

$$\frac{2x-1}{3} = \frac{x-2}{3} + 1$$

$$\Rightarrow \frac{2x-1}{3} = \frac{(x-2)+3}{3}$$

$$\Rightarrow 3(2x-1) = 3(x+1)$$

$$\Rightarrow 6x - 3 = 3x + 3$$

$$\Rightarrow 6x - 3x = 3 + 3$$

$$\Rightarrow 3x = 6$$

$$\Rightarrow x = \frac{6}{3}$$

$$= 2$$

Q8

Answer :

(b) 26

Let the consecutive whole numbers be x and $(x + 1)$.

Then, $x + (x + 1) = 53$

$$\Rightarrow 2x + 1 = 53$$

$$\Rightarrow 2x = 53 - 1$$

$$\Rightarrow x = \frac{52}{2}$$

$$\Rightarrow x = 26$$

Q9

Answer :

(d) 44

Let the two consecutive even numbers be x and $(x + 2)$.

Then, $x + (x + 2) = 86$

$$\Rightarrow 2x + 2 = 86$$

$$\Rightarrow 2x = 86 - 2$$

$$\Rightarrow x = \frac{84}{2}$$

$$\Rightarrow x = 42$$

\therefore The required numbers are 42 and $(42 + 2)$, i.e., 44.

Q10

Answer :

***** END *****