



### Exercise 8C

Q1

**Answer :**

(c) 5

$$\begin{aligned}2x - 3 &= x + 2 \\ \Rightarrow 2x - x &= 3 + 2 \\ \Rightarrow x &= 5\end{aligned}$$

Q2

**Answer :**

(b)  $-5$

$$\begin{aligned}5x + \frac{7}{2} &= \frac{3}{2}x - 14 \\ \Rightarrow \frac{10x + 7}{2} &= \frac{3x - 28}{2} \\ \Rightarrow 10x + 7 &= 3x - 28 \\ \Rightarrow 10x - 3x &= -28 - 7 \\ \Rightarrow 7x &= -35 \\ \Rightarrow x &= \frac{-35}{7} = -5\end{aligned}$$

Q3

**Answer :**

(a) 40

$$z = \frac{4}{5} (z + 10)$$

$$\Rightarrow 5z = 4(z + 10)$$

$$\Rightarrow 5z = 4z + 40$$

$$\Rightarrow 5z - 4z = 40$$

$$\Rightarrow z = 40$$

Q4

**Answer :**

(c)  $\frac{4}{5}$

$$3m = 5m - \frac{8}{5}$$

$$\Rightarrow 3m = \frac{25m - 8}{5}$$

$$\Rightarrow 15m = 25m - 8$$

$$\Rightarrow 15m - 25m = -8$$

$$\Rightarrow -10m = -8$$

$$\Rightarrow m = \frac{-8}{-10} = \frac{4}{5}$$

Q5

Answer :

(b) -1

$$\begin{aligned}5t - 3 &= 3t - 5 \\ \Rightarrow 5t - 3t &= 3 - 5 \\ \Rightarrow 2t &= -2 \\ \Rightarrow t &= \frac{-2}{2} = -1\end{aligned}$$

Q6

Answer :

(d)  $\frac{7}{3}$

$$\begin{aligned}2y + \frac{5}{3} &= \frac{26}{3} - y \\ \Rightarrow \frac{6y + 5}{3} &= \frac{26 - 3y}{3} \\ \Rightarrow 6y + 5 &= 26 - 3y \\ \Rightarrow 6y + 3y &= 26 - 5 \\ \Rightarrow 9y &= 21 \\ \Rightarrow y &= \frac{21}{9} = \frac{7}{3}\end{aligned}$$

Q7

Answer :

(b) -1

$$\frac{6x+1}{3} + 1 = \frac{x-3}{6}$$

$$\Rightarrow \frac{6x+1+3}{3} = \frac{x-3}{6}$$

$$\Rightarrow 6(6x+4) = 3(x-3)$$

$$\Rightarrow 36x+24 = 3x-9$$

$$\Rightarrow 36x-3x = -24-9$$

$$\Rightarrow 33x = -33$$

$$\Rightarrow x = \frac{-33}{33} = -1$$


Q8

Answer :

(c) 36

$$\begin{aligned}\frac{n}{2} - \frac{3n}{4} + \frac{5n}{6} &= 21 \\ \Rightarrow \frac{6n - 9n + 10n}{12} &= 21 \\ \Rightarrow 7n &= 21 \times 12 \\ \Rightarrow 7n &= 252 \\ \Rightarrow n &= \frac{252}{7} = 36\end{aligned}$$

Q9

 Save :

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

$$\begin{aligned}\frac{x+1}{2x+3} &= \frac{3}{8} \\ \Rightarrow 8(x+1) &= 3(2x+3) \\ \Rightarrow 8x+8 &= 6x+9 \\ \Rightarrow 8x-6x &= 9-8 \\ \Rightarrow 2x &= 1 \\ \Rightarrow x &= \frac{1}{2}\end{aligned}$$

Q10

Answer :

(c) 8

$$\begin{aligned}\frac{4x+8}{5x+8} &= \frac{5}{6} \\ \Rightarrow 6(4x+8) &= 5(5x+8)\end{aligned}$$

$$\begin{aligned}
 & \Rightarrow 24x + 48 = 25x + 40 \\
 & \Rightarrow 24x - 25x = -48 + 40 \\
 & \Rightarrow -x = -8 \\
 & \Rightarrow x = 8
 \end{aligned}$$

Q11

**Answer :**

(d) 12

$$\begin{aligned}
 \frac{n}{n+15} &= \frac{4}{9} \\
 \Rightarrow 9n &= 4(n+15) \\
 \Rightarrow 9n &= 4n+60 \\
 \Rightarrow 9n-4n &= 60 \\
 \Rightarrow 5n &= 60 \\
 \Rightarrow n &= \frac{60}{5} = 12
 \end{aligned}$$

Q12

**Answer :**

(a) -2

$$\begin{aligned}
 3(t-3) &= 5(2t+1) \\
 \Rightarrow 3t-9 &= 10t+5 \\
 \Rightarrow 3t-10t &= 9+5 \\
 \Rightarrow -7t &= 14 \\
 \Rightarrow -t &= \frac{14}{7} = 2 \\
 \Rightarrow t &= -2
 \end{aligned}$$

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

