

EXERCISE 22 (C)

Question 1.

$$5 - x = 3$$

Solution:

$$5 - x = 3$$

$$\Rightarrow 5 - 3 = x$$

$$\Rightarrow x = 2$$

Question 2.

$$2 - y = 8$$

Solution:

$$2 - y = 8$$

$$\Rightarrow 2 - 8 = y$$

$$\Rightarrow -6 = y$$

$$\Rightarrow y = -6$$



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Question 3.

$$8.4 - x = -2$$

Solution:

$$8.4 - x = -2$$

$$\Rightarrow 8.4 + 2 = x$$

$$\Rightarrow x = 10.4$$

Question 4.

$$x + 2\frac{1}{5} = 3$$

Solution:

$$x + 2\frac{1}{5} = 3$$

$$\Rightarrow x + \frac{11}{5} = 3 \Rightarrow x = 3 - \frac{11}{5}$$

$$\Rightarrow x = \frac{15-11}{5} = x = \frac{4}{5}$$

Question 5.

$$y - 3\frac{1}{2} = 2\frac{1}{3}$$

Solution:

$$y - 3\frac{1}{2} = 2\frac{1}{3}$$

$$\Rightarrow y - \frac{7}{2} = \frac{7}{3} \Rightarrow y = \frac{7}{3} + \frac{7}{2}$$

$$\Rightarrow 6 \times y = \frac{7}{3} \times 6 + \frac{7}{2} \times 6$$

(multiply both side by 6)

$$\Rightarrow 6y = 14 + 21 \Rightarrow y = \frac{35}{6}$$

$$\Rightarrow y = 5\frac{5}{6}$$



Question 6.

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

Solution:

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

$$\Rightarrow \frac{17}{3} - z = \frac{5}{2} \quad \Rightarrow \frac{17}{3} - \frac{5}{2} = z$$

$$\Rightarrow 6 \times z = \frac{17}{3} \times 6 - \frac{5}{2} \times 6$$

(multiply both side by 6)

$$\Rightarrow 6z = 34 - 15 \Rightarrow 6z = 19$$

$$\Rightarrow z = \frac{19}{6} \quad \Rightarrow z = 3\frac{1}{6}$$

Question 7.

$$1.6z = 8$$

Solution:

$$1.6z = 8$$

$$\Rightarrow z = \frac{8}{1.6}$$

$$\Rightarrow z = \frac{8 \times 10}{16} \Rightarrow z = 5$$

Question 8.

$$3a = -2.1$$

Solution:

$$3a = -2.1$$

$$\Rightarrow a = \frac{-2.1}{3}$$

$$\Rightarrow a = \frac{-21}{3 \times 10} = -\frac{7}{10} = -0.7$$

Question 9.

$$\frac{z}{4} = -1.5$$



Solution:

$$\frac{z}{4} = -1.5$$

$$\Rightarrow z = -1.5 \times 4 \Rightarrow z = -6.0$$

Question 10.

$$\frac{z}{6} = -1\frac{2}{3}$$

Solution:

$$\frac{z}{6} = -1\frac{2}{3}$$

$$\Rightarrow \frac{z}{6} = -\frac{5}{3} \Rightarrow z \times 3 = -5 \times 6$$

$$\Rightarrow z = \frac{-5 \times 6}{3} \Rightarrow z = -10$$

Question 11.

$$-5x = 10$$

Solution:

$$-5x = 10$$

$$\Rightarrow x = \frac{10}{-5} \Rightarrow x = -2$$

Question 12.

$$2.4z = -4.8$$

Solution:

$$2.4z = -4.8$$

$$\Rightarrow z = \frac{-4.8}{2.4} \Rightarrow z = -2$$

Question 13.

$$2y - 5 = -11$$



Solution:

$$2y - 5 = -11$$

$$\Rightarrow 2y = -11 + 5 \Rightarrow 2y = -6$$

$$\Rightarrow y = -\frac{6}{2} \Rightarrow y = -3$$

Question 14.

$$2x + 4.6 = 8$$

Solution:

$$2x + 4.6 = 8$$

$$\Rightarrow 2x = 8 - 4.6 \Rightarrow 2x = 3.4$$

$$\Rightarrow x = \frac{3.4}{2} \Rightarrow x = \frac{34}{2 \times 10}$$

$$\Rightarrow x = \frac{17}{10} = 1.7$$

Question 15.

$$5y - 3.5 = 10$$

Solution:

$$5y - 3.5 = 10$$

$$\Rightarrow 5y = 10 + 3.5 \Rightarrow 5y = 13.5$$

$$\Rightarrow y = \frac{13.5}{5} \Rightarrow y = 2.7$$

Question 16.

$$3x + 2 = -2.2$$

Solution:

$$3x + 2 = -2.2$$

$$\Rightarrow 3x = -2.2 - 2 \Rightarrow 3x = -4.2$$

$$\Rightarrow x = \frac{-4.2}{3 \times 10} \Rightarrow x = -\frac{14}{10}$$

$$\Rightarrow x = -\frac{7}{5} \Rightarrow x = -1\frac{2}{5}$$

$$x = -1.4$$

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Question 17.

$$\frac{y}{2} - 5 = 1$$

Solution:

$$\frac{y}{2} - 5 = 1$$

$$\Rightarrow \frac{y}{2} \times 2 - 5 \times 2 = 1 \times 2$$

$$\Rightarrow y - 10 = 2 \quad \Rightarrow y = 2 + 10$$

$$\Rightarrow y = 12$$

Question 18.

$$\frac{z}{3} - 1 = -5$$

Solution:

$$\frac{z}{3} - 1 = -5$$

$$\Rightarrow \frac{z}{3} \times 3 - 1 \times 3 = -5 \times 3$$

$$\Rightarrow z - 3 = -15$$

$$\Rightarrow z = -15 + 3$$

$$\Rightarrow z = -12$$

Question 19.

$$\frac{x}{4} + 3 \cdot 6 = -1 \cdot 1$$

Solution:

$$\frac{x}{4} + 3 \cdot 6 = -1 \cdot 1$$

$$\Rightarrow \frac{x}{4} = -1 \cdot 1 - 3 \cdot 6 \quad \Rightarrow \frac{x}{4} = -4 \cdot 7$$

$$\Rightarrow x = -4 \cdot 7 \times 4$$

$$\Rightarrow x = -18 \cdot 8$$



Question 20.

$$-3y - 2 = 10$$

Solution:

$$-3y - 2 = 10$$

$$\Rightarrow -3y = 10 + 2 \quad \Rightarrow -3y = 12$$

$$\Rightarrow y = \frac{12}{-3} \quad \Rightarrow y = -4$$

Question 21.

$$4z - 5 = 3 - z$$

Solution:

$$4z - 5 = 3 - z$$

$$\Rightarrow 4z + z = 3 + 5 \quad \Rightarrow 5z = 8$$

$$\Rightarrow z = \frac{8}{5} = 1.6$$

Question 22.

$$7x - 3x + 2 = 22$$

Solution:

$$7x - 3x + 2 = 22$$

$$\Rightarrow 7x - 3x = 22 - 2 \quad \Rightarrow 4x = 20$$

$$\Rightarrow x = \frac{20}{4} \quad \Rightarrow x = 5$$

Question 23.

$$6y + 3 = 2y + 11$$

Solution:

$$6y + 3 = 2y + 11$$

$$\Rightarrow 6y - 2y = 11 - 3 \quad \Rightarrow 4y = 8$$

$$\Rightarrow y = \frac{8}{4} \quad \Rightarrow y = 2$$

Question 24.

$$3(x+5) = 18$$

Solution:

$$3(x+5) = 18$$

$$\Rightarrow 3x + 15 = 18 \quad \Rightarrow 3x = 18 - 15 = 3$$

$$x = \frac{3}{3} = 1$$

$$\therefore x = 1$$

Question 25.

$$5(x-2) - 2(x+2) = 3$$

Solution:

$$5(x-2) - 2(x+2) = 3$$

$$\Rightarrow 5x - 10 - 2x - 2 = 3$$

$$\Rightarrow 5x - 2x - 10 - 2 = 3$$

$$\Rightarrow 3x - 12 = 3$$

$$\Rightarrow 3x = 3 + 12$$

$$\Rightarrow x = \frac{15}{3} = 5$$

$$\therefore x = 5$$

Question 26.

$$(5x-3) \cdot 4 = 3$$

Solution:

$$(5x-3) \cdot 4 = 3$$

$$\Rightarrow \frac{5x-3}{4} = 3 \quad \Rightarrow 5x-3 = 3 \times 4$$

$$\Rightarrow 5x - 3 = 12 \Rightarrow 5x = 12 + 3$$

$$\Rightarrow 5x = 15 \Rightarrow x = \frac{15}{5} = 3$$

$$\therefore x = 3$$

Question 27.

$$3(2x+1) - 2(x-5) - 5(5-2x) = 16$$

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Solution:

$$\begin{aligned}3(2x+1) - 2(x-5) - 5(5-2x) &= 16 \\ \Rightarrow 6x + 3 - 2x + 10 - 25 + 10x &= 16 \\ \Rightarrow 6x - 2x + 10x + 3 + 10 - 25 &= 16 \\ \Rightarrow 16x - 2x + 13 - 25 &= 16 \\ \Rightarrow 14x - 12 = 16 &\quad \Rightarrow 14x = 16 + 12 = 28 \\ \Rightarrow x = \frac{28}{14} &= 2 \\ \therefore x = 2\end{aligned}$$



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