

13.8.21

## CHAPTER-22

### Simple (Linear) Equations

Ex - 22 (A)

1. Solve:

$$(i) x + 2 = 6$$

$$= x + 2 - 2 = 6 - 2$$

$$= x = 4$$

$$(ii) x + 6 = 2$$

$$= x + 6 - 6 = 2 - 6$$

$$= x = -4$$

$$(iii) 4y + 8 = 5$$

$$= 4y + 8 - 8 = 5 - 8$$

$$= 4y = -3$$

$$(iv) x + 4 = -3$$

$$= x + 4 - 4 = -3 - 4$$

$$= x = -7$$

$$(v) 4y + 2 = -8$$

$$= 4y + 2 - 2 = -8 - 2$$

$$= 4y = -10$$

$$(vi) b + 2.5 = 4.2$$

$$= b + 2.5 - 2.5 = 4.2 - 2.5$$

$$= b = 1.7$$

$$(vii) P + 4.6 = 8.5$$

$$= P + 4.6 - 4.6 = 8.5 - 4.6$$

$$= P = 3.9$$

$$(viii) y + 3.2 = -6.5$$

$$= y + 3.2 - 3.2 = -6.5 - 3.2$$

$$= y = -9.7$$

2. Solve:

$$(i) \quad x - 3 = 2$$

$$\Rightarrow x = 2 + 3$$

$$\Rightarrow x = 5$$

$$(iv) \quad a - 2.5 = -4$$

$$\Rightarrow a = -4 + 2.5$$

$$\Rightarrow a = -1.5$$

$$(vi) \quad z - \frac{21}{3} = -6$$

$$\Rightarrow z = -6 + \frac{21}{3}$$

$$(ii) \quad m - 2 = -5$$

$$\Rightarrow m = -5 + 2$$

$$\Rightarrow m = -3$$

$$(v) \quad y - \frac{31}{2} = 6$$

$$\Rightarrow y = \frac{6 + 31}{2}$$

$$\Rightarrow z = \frac{25}{3}$$

$$(iii) \quad b - 5 = 7$$

$$\Rightarrow b = 7 + 5$$

$$\Rightarrow b = 12$$

$$\Rightarrow y = \frac{19}{2}$$

$$(vii) \quad p - 5.4 = 2.7$$

$$\Rightarrow p = 2.7 + 5.4$$

$$\Rightarrow p = 8.1$$

$$(viii) \quad x - 1.5 = -4.9$$

$$\Rightarrow x = -4.9 + 1.5$$

$$\Rightarrow x = -3.4$$

$$(ix) \quad n - 4 = -4 \frac{1}{5}$$

$$\Rightarrow n = 4 \frac{1}{5} + 4$$

$$\Rightarrow n = \frac{41}{5}$$

$$1.(x) \quad a + 8.9 = -12.6$$

$$\Rightarrow a = -12.6 - 8.9$$

$$\Rightarrow a = -21.5$$

$$(x) \quad x + \frac{21}{3} = 5$$

$$\Rightarrow x = 5 - \frac{21}{3}$$

$$\Rightarrow x = \frac{8}{3}$$

$$(xi) \quad z + 2 = 4 \frac{1}{5}$$

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

$$\Rightarrow z = \frac{11}{5}$$

$$(xii) \quad m + 3 \frac{1}{2} = 4 \frac{1}{4}$$

$$\Rightarrow m = 4 \frac{1}{4} - 3 \frac{1}{2}$$

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

$$(xiii) \quad x + 2 = 1 \frac{1}{4}$$

$$\Rightarrow x = 1 \frac{1}{4} - 2$$

$$\Rightarrow x = -\frac{3}{4}$$

$$(xiv) \quad y + \frac{51}{3} = 4$$

$$\Rightarrow y = 4 - \frac{51}{3}$$

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

$$(xv) \quad a + 3 \frac{1}{5} = 1 \frac{1}{2}$$

$$\Rightarrow a = 1 \frac{1}{2} - 3 \frac{1}{5}$$

$$\Rightarrow a = \frac{17}{10}$$

3. (i)  $3x = 12$   
 $= x = 12 \div 3$   
 $= x = 4$

(ii)  $2y = 9$   
 $= y = 9 \div 2$   
 $= y = 4.5$

(iii)  $5z = 8.5$   
 $= z = 8.5 \div 5$   
 $= z = 1.7$

(iv)  $2.5m = 7.5$   
 $= m = 7.5 \div 2.5$   
 $= m = 3$

(v)  $3.2p = 16$   
 $= p = 16 \div 3.2$   
 $= p = 5$

(vi)  $2a = 4.6$   
 $= a = 4.6 \div 2$   
 $= a = 2.3$

4. (i)  $\frac{x}{2} = 5$   
 $= x = 5 \times 2$   
 $= x = 10$

(ii)  $\frac{y}{3} = -2$   
 $= y = -2 \times 3$   
 $= y = -6$

(iii)  $\frac{a}{5} = -15$   
 $= a = -15 \times 5$   
 $= a = -75$

(iv)  $\frac{z}{4} = 3 \frac{1}{4}$   
 $= \frac{z}{4} = \frac{13}{4}$   
 $= z = \frac{13}{4} \times 4$   
 $= z = 13$

(v)  $\frac{m}{6} = 2 \frac{1}{2}$   
 ~~$= \frac{m}{6} = 2.5$~~   
 ~~$= m = 2.5 \times 6$~~   
 ~~$= m = 15$~~

(vi)  ~~$\frac{n}{7} = -2.8$~~   
 ~~$= n = -2.8 \times 7$~~   
 ~~$= n = -19.6$~~

(vi)  ~~$\frac{n}{7} = -2.8$~~   
 ~~$= n = -2.8 \times 7$~~   
 ~~$= n = -19.6$~~

5. (i)  $-2x = 8$   
 $= x = 8 \div (-2)$   
 $= x = -4$

(ii)  $-3.5y = 14$   
 $= y = 14 \div (-3.5)$   
 $= y = -4$

(iii)  $-5z = 4$   
 $= z = 4 \div (-5)$   
 $= z = -0.8$

(ii)  ~~$-3.5y = 14$~~   
 ~~$= y = 14 \div (-3.5)$~~   
 ~~$= y = -4$~~

(iv)  ~~$-5 = a + 3$~~   
 ~~$= a + 3 = -5$~~   
 ~~$= a = -5 - 3$~~   
 ~~$= a = -8$~~

(v)  $2 = p + 5$   
 $= p + 5 = 2$   
 $= p = 2 - 5$   
 $= p = -3$

(vi)  $4.5 = m - 2.7$   
 $= m - 2.7 = 4.5$   
 $= m = 4.5 + 2.7$   
 $= m = 7.2$

(vii)  $3 \frac{2}{5} = x - 2 \frac{1}{3}$   
 $= x - 2 \frac{1}{3} = 3 \frac{2}{5}$   
 $= x = 3 \frac{2}{5} + 2 \frac{1}{3}$

$$= x = \frac{17}{5} + \frac{7}{3}$$

$$= x = \frac{86}{15}$$

$$(viii) 5 = m + 34$$

$$= m + 34 - 7$$

$$= m - 5 = 34$$

$$- m = 5 - 34$$

$$= m = \frac{107}{1}$$

$$(ix) -2 \frac{1}{5} = y - 4$$

$$= y - 4 = -2 \frac{1}{5}$$

$$= y = -2 \frac{1}{5} + 4$$

$$= y = -\frac{11}{5}$$

$$= y = -\frac{11}{5} + 4$$

$$= y = -\frac{31}{5}$$