Chapter:- 26 Simple (Linear) Equations

Exercise 26A

2) Solve

i) $x+2=6$

Ans:- $x+2-2=6-2$

$x=4$

ii) $x+6=2$

Ans:- $x+6-6=2-6$

$x=-4$

iii) $y+8=5$

Ans:- $y+8-8=5-8$

$y=-3$

iv) $x+4=-3$

Ans:- $x+4-4=-3-4$

$x=-7$

v) $y+2=-8$

Ans:- $y+2-2=-8-2$

$y=-10$

vi) $v+2.5=4.2$

Ans:- $v+2.5-2.5=4.2-2.5$

$v=1.7$

vii) $p+4.6=8.5$

Ans:- $p+4.6-4.6=8.5-4.6$

$p=3.9$

viii) $y+3.2=-6.5$

Ans:- $y+3.2-3.2=-6.5-3.2$

$y=-9.7$

ix) $a+8.9=-12.6$

Ans:- $a+8.9-8.9=-12.6-8.9$

$a=-20.15$

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

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

$=x=\frac{5}{1}-\frac{7}{3}$

$=x=\frac{15-7}{3}=\frac{8}{3}$

$=x=2\frac{2}{3}$

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

Ans:- $z+2-2=4\frac{1}{5}-2$

$z=\frac{21}{5}-\frac{2}{1}=$ [illegible]

$=\frac{21-10}{5}=\frac{11}{5}$

$2\frac{1}{5}$

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

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

$m = \frac{17}{4} - \frac{7}{2}$

LCM of 4 and 2 = 4

$\frac{17}{4} - \frac{7 \times 2}{2 \times 2} = \frac{14}{4}$

$x = \frac{17 - 14}{4} = \frac{3}{4}$.

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

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

$\frac{5}{4} + \frac{3}{4} \quad \frac{1}{1} \cdot \frac{5}{4}$

$x = \frac{5-8}{4} = \frac{-3}{4}$

xiv) $y + 5\frac{1}{3} = 4$

$y + 5\frac{1}{3} - 5\frac{1}{3} = 4 - 5\frac{1}{3}$

$y = \frac{12 - 16}{3} = \frac{-4}{3} \quad 1\frac{1}{3}$

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

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

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

$a = \frac{3}{2} - \frac{16}{5}$

$a = \frac{-15 - 32}{10} = \frac{-17}{10}$.

$a = -1\frac{7}{10}$

2. Solve

i) $x-3=2$

$x-3+3=2+3$

$x=5$

ii) $m-2=-5$

$m-2+2=-5+2$

$m=-3$

iii) $b-5=7$

$b-5+5=7+5$

$b=12$

iv) $a-2.5=-4$

$a-2.5+2.5=-4+2.5$

$a=-1.5$

v) $y-3\frac{1}{2}=6$

$y-3\frac{1}{2}+3\frac{1}{2}=6+3\frac{1}{2}$

$y=\frac{12+7}{2}$

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

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

$z-2\frac{1}{3}+2\frac{1}{3}=-6+2\frac{1}{3}$ $z=\frac{-18+7}{3}=\frac{-11}{3}=-3\frac{2}{3}$

vii) $p-5.4=2.7$

$p-5.4+5.4=2.7+5.4$

$p=8.1$

viii) $x-1.5=-4.9$

$=x-1.5+1.5=-4.9+1.5$

$=-3.4$

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

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

$n=\frac{-21}{5}+\frac{20}{5}=\frac{-1}{5}$

3. Solve

i) $3x = 12$

Ans:- $\frac{3x}{3} = \frac{12}{3}$

$x = 4$

ii) $2y = 9$

Ans:- $\frac{2y}{2} = \frac{9}{2}$

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

iii) $5a = 8.5$

Ans:- $\frac{5a}{5} = \frac{8.5}{5}$

$a = 1.7$

iv) $2.5m = 7.5$

Ans:- $\frac{2.5m}{2.5} = \frac{7.5}{2.5}$ $m = 3$

v) $3.2p = 16$

Ans:- $\frac{3.2p}{3.2} = \frac{16}{3.2}$ $p = 5$

vi) $2a = 4.6$

Ans:- $\frac{2a}{2} = \frac{4.6}{2} = 2.3$

4. Solve

i) $\frac{x}{2} = 5$

Ans) $\frac{x}{2} \times 2 = 5 \times 2$

$x = 10$

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

Ans) $\frac{y}{3} \times 3 = -2 \times 3$

$y = -6$

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

Ans) $\frac{a}{5} \times 5 = -15 \times 5$

$a = -75$

iv) $\frac{a}{4} = 3\frac{1}{4}$

Ans) $\frac{a}{4} \times 4 = 3\frac{1}{4} \times 4$

$\frac{13}{4} \times 4 = 13$

v) $\frac{m}{6} = 2\frac{1}{2}$

Ans $\frac{m}{6} \times 6 = 2\frac{1}{2} \times 6$

$m = \frac{5}{2} \times 6 = \frac{30}{2} = 15$

vi) $\frac{n}{7} = -2.8$

Ans:- $\frac{n}{7} \times 7 = -2.8 \times 7$

$n = -19.6$

5. Solve

i) $-2x = 8$

Ans $\frac{-2x}{-2} = \frac{8}{-2}$ $x = -4$

iii) $-3.5y = 14$

Ans $\frac{-3.5y}{-3.5} = \frac{14}{-3.5y}$ $y = -4$

iii) $-5z = 4$

Ans $\frac{-5z}{-5} = \frac{4}{-5}$ $z = \frac{-4}{5}$

iv) $-5 = a + 3$

Ans $a + 3 - 3 = -5 - 3$

$a = -8$

v) $2 = p + 5$

Ans $p + 5 - 5 = 2 - 5$

$p = -3$

vi) $4.5 = m - 2.7$

Ans $m - 2.7 + 2.7 = 4.5 + 2.7$

$m = 7.2$

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

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

$\frac{51}{15} + \frac{35}{15} = \frac{86}{15}$

$x = 5\frac{11}{15}$

viii) $5 = m + 3\frac{4}{7}$

$m + 3\frac{4}{7} - 3\frac{4}{7} = 5 - 3\frac{4}{7}$

$\frac{35 - 25}{7} = \frac{10}{7} = 1\frac{3}{7}$

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

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

$y = \frac{-11 + 20}{5} = \frac{9}{5} = y = 1\frac{4}{5}$