18-8-21

SIMPLE (Linear) EQUATIONS

Ch - 22

Ex - 22 (A)

1. Solve :

i) $x+2=6$
$\Rightarrow x=6-2=4$
$\Rightarrow x=4$

ii) $x+6=2$
$\Rightarrow x=2-6$
$\Rightarrow x=-4$

iii) $y+8=5$
$\Rightarrow y=5-8$
$\Rightarrow y=-3$

iv) $x+4=-3$
$\Rightarrow x=-3-4$
$\Rightarrow x=-7$

v) $y+2=8$
$\Rightarrow y=8-2$
$\Rightarrow y=6$

vi) $b+2.5=4.2$
$\Rightarrow b=4.2-2.5$
$\Rightarrow b=1.7$

vii) $p+4.6=8.5$
$\Rightarrow p=8.5-4.6$
$\Rightarrow p=3.9$

viii) $y+3.2=-6.5$
$\Rightarrow y=-6.5-3.2$
$\Rightarrow y=-9.7$

ix) $a+8.9=-12.6$
$\Rightarrow a=-12.6-8.9$
$\Rightarrow a=-21.5$

x) $x+2\frac{1}{3}=5$
$\Rightarrow x+\frac{7}{3}=5$
$\Rightarrow x=5-\frac{7}{3}$
$\Rightarrow x=\frac{15-7}{3}$
$\Rightarrow x=\frac{8}{3}=2\frac{2}{3}$

xi) $z+2=4\frac{1}{5}$
$\Rightarrow z+2=\frac{21}{5}$
$\Rightarrow z=\frac{21}{5}-2$
$\Rightarrow z=\frac{21-10}{5}=\frac{11}{5}$
$\Rightarrow z=2\frac{1}{5}$

xii) $m+3\frac{1}{2}=4\frac{1}{4}$
$\Rightarrow m+\frac{7}{2}=\frac{17}{4}$
$\Rightarrow m=\frac{17}{4}-\frac{7}{2}$
$\Rightarrow m=\frac{17-14}{4}$
$\Rightarrow m=\frac{3}{4}$

xiii) $x+2=1\frac{1}{4}$
$\Rightarrow x=\frac{5}{4}-2$
$\Rightarrow x=\frac{5-8}{4}$
$\Rightarrow x=-\frac{3}{4}$

xiv) $y+5\frac{1}{3}=4$
$\Rightarrow y=4-\frac{16}{3}$
$\Rightarrow y=\frac{12-16}{3}$
$\Rightarrow y=-\frac{4}{3}=-1\frac{1}{3}$

xv) $a+3\frac{1}{5}=1\frac{1}{2}$
$\Rightarrow a=\frac{3}{2}-\frac{16}{5}$
$\Rightarrow a=\frac{15-32}{10}$
$\Rightarrow a=\frac{-17}{10}=-1\frac{7}{10}$

2. Solve :

i) $x - 3 = 2$
$\Rightarrow x = 2 + 3$
$\Rightarrow x = 5$

ii) $m - 2 = -5$
$\Rightarrow m = -5 + 2$
$\Rightarrow m = -3$

iii) $b - 5 = 7$
$\Rightarrow b = 7 + 5$
$\Rightarrow b = 12$

iv) $a - 2.5 = -4$
$\Rightarrow a = -4 + 2.5$
$\Rightarrow a = -1.5$

v) $y - 3\frac{1}{2} = 6$
$\Rightarrow y - \frac{7}{2} = 6$
$\Rightarrow y = 6 + \frac{7}{2}$
$\Rightarrow y = \frac{12+7}{2}$
$\Rightarrow y = \frac{19}{2} = 9\frac{1}{2}$

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

vii) $p - 5.4 = 2.7$
$\Rightarrow p = 2.7 + 5.4$
$\Rightarrow p = 8.1$

viii) $x - 1.5 = -4.9$
$\Rightarrow x = -4.9 + 1.5$
$\Rightarrow x = -3.4$

ix) $n - 4 = -4\frac{1}{5}$
$\Rightarrow n = -\frac{21}{5} + 4$
$\Rightarrow n = \frac{-21+20}{5}$
$\Rightarrow n = -\frac{1}{5}$

3. Solve :

i) $3x = 12$
$\Rightarrow x = \frac{12}{3}$
$\Rightarrow x = 4$

ii) $2y = 9$
$\Rightarrow y = \frac{9}{2}$
$\Rightarrow y = 4\frac{1}{2}$

iii) $5z = 8.5$
$\Rightarrow z = \frac{8.5}{5}$
$\Rightarrow z = 1.7$

iv) $2.5m = 7.5$
$\Rightarrow m = \frac{7.5}{2.5} = 3$

v) ~~$3.2p = 16$~~
~~$\Rightarrow p = \frac{16}{3.2}$~~
~~$\Rightarrow p =$~~

v) $3.2p = 16$
$\Rightarrow p = \frac{16}{3.2}$
$\Rightarrow p = \frac{16}{32} \times 10 = 5$

vi) $2a = 4.6$

$\Rightarrow a = \frac{4.6}{2}$

$\Rightarrow a = 2.3$

4. Solve :

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

$\Rightarrow x = 5 \times 2$

$\Rightarrow x = 10$

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

$\Rightarrow y = -2 \times 3$

$\Rightarrow y = -6$

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

$\Rightarrow a = -15 \times 5$

$\Rightarrow a = -75$

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

$\Rightarrow \frac{z}{4} = \frac{13}{4}$

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

$\Rightarrow z = 13$

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

$\Rightarrow \frac{m}{6} = \frac{5}{2}$

$\Rightarrow m = \frac{5}{2} \times 6^3$

$\Rightarrow m = 15$

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

$\Rightarrow n = -2.8 \times 7$

$\Rightarrow n = -19.6$

5. Solve :

i) $-2x = 8$

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

ii) $-3.5y = 14$

$\Rightarrow y = \frac{14}{-3.5}$

$\Rightarrow y = \frac{-14 \times 10}{35} = -4$

iii) $-5z = 4$

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

$\Rightarrow z = -0.8$

iv) $-5 = a + 3$

$\Rightarrow a + 3 = -5$

$\Rightarrow a = -5 - 3$

$\Rightarrow a = -8$

v) $2 = p + 5$

$\Rightarrow p + 5 = 2$

$\Rightarrow p = 2 - 5$

$\Rightarrow p = -3$

vi) $4.5 = m - 2.7$

$\Rightarrow m - 2.7 = 4.5$

$\Rightarrow m = 4.5 + 2.7$

$\Rightarrow m = 7.2$

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

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

$\Rightarrow x - \frac{7}{3} = \frac{17}{5}$

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

$\Rightarrow x = \frac{51+35}{15}$

$\Rightarrow x = \frac{86}{15} = 5\frac{11}{15}$

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

$\Rightarrow m + \frac{25}{7} = 5$

$\Rightarrow m = 5 - \frac{25}{7}$

$\Rightarrow m = \frac{35-25}{7}$

$\Rightarrow m = \frac{10}{7}$

$\Rightarrow m = 1\frac{3}{7}$

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

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

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

$\Rightarrow y = \frac{-11+20}{5}$

$\Rightarrow y = \frac{9}{5} = 1\frac{4}{5}$.