EXERCISE - 22(A)

(1) Solve :-

i) $x + 2 = 6$

$\Rightarrow x + 2 - 2 = 6 - 2$

$\Rightarrow x = 4$ (Ans)

ii) $x + 6 = 2$

$\Rightarrow x + 6 - 6 = 2 - 6$

$\Rightarrow x = -4$ (Ans)

iii) $y + 8 = 5$

$\Rightarrow y + 8 - 8 = 5 - 8$

$\Rightarrow y = -3$

iv) $x + 4 = -3$

$\Rightarrow x + 4 - 4 = -3 - 4$

$\Rightarrow x = -7$ (Ans)

v) $y + 2 = -8$

$\Rightarrow y + 2 - 2 = -8 - 2$

$\Rightarrow y = -10$

vi) $b + 2.5 = 4.2$

$\Rightarrow b + 2.5 - 2.5 = 4.2 - 2.5$

$\Rightarrow b = 1.7$

vii) $p + 4.6 = 8.5$

$\Rightarrow p + 4.6 - 4.6 = 8.5 - 4.6$

$\Rightarrow p = 3.9$

viii) $y + 3.2 = -6.5$

$\Rightarrow y + 3.2 - 3.2 = -6.5 - 3.2$

$\Rightarrow y = -9.7$

ix) $a + 8.9 = -12.6$

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

$\Rightarrow a = -21.5$

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

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

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

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

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

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

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

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

$\Rightarrow z + 2 - 2 = \frac{21}{5} - 2$

$\Rightarrow z = \frac{21}{5} - \frac{2}{1}$

$\Rightarrow z = \frac{21}{5} - \frac{10}{5}$

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

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

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

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

$\Rightarrow m = \frac{17}{4} - \frac{14}{4}$

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

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

$\Rightarrow x + 2 - 2 = \frac{5}{4} - 2$

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

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

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

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

$\Rightarrow y + \frac{16}{3} - \frac{16}{3} = \frac{4}{1} - \frac{16}{3}$

$\Rightarrow y = \frac{12}{3} - \frac{16}{3}$

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

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

2) $a + 3\frac{1}{6} = 1\frac{1}{2}$

$\Rightarrow a + \frac{19}{6} - \frac{16}{5} = \frac{3}{2} - \frac{16}{5}$

$\Rightarrow a = \frac{15}{10} - \frac{32}{10}$ [∵ lcm of 2 and 5 = 10]

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

$\Rightarrow x = -1\frac{7}{10}$

(2) Solve :-

i) $x - 3 = 2$

$\Rightarrow x - 3 + 3 = 2 + 3$

$\Rightarrow x = 5$

ii) $m - 2 = -5$

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

$\Rightarrow m = -3$

iii) $b - 5 = 7$

$\Rightarrow b - 5 + 5 = 7 + 5$

$\Rightarrow b = 12$

iv) $a - 2.5 = -4$

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

$\Rightarrow a = -1.5$

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

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

$\Rightarrow y = \frac{6}{1} + \frac{7}{2}$

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

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

$\Rightarrow y = 9\frac{1}{2}$

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

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

$\Rightarrow z = \frac{-6}{1} + \frac{7}{3}$

$\Rightarrow z = \frac{-18}{3} + \frac{7}{3}$

$\Rightarrow z = \frac{-11}{3}$

$\Rightarrow z = -3\frac{2}{3}$

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

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

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

$\Rightarrow n = \frac{-1}{5}$

(3) Solve:

i) $3x = 12$

$\Rightarrow \frac{3x}{3} = \frac{12}{3}^{4}$

$\Rightarrow x = 4$

ii) $2y = 9$

$\Rightarrow \frac{2y}{2} = \frac{9}{2}$

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

iii) $5z = 8.5$

$\Rightarrow \frac{5z}{5} = \frac{8.5}{5}^{1.7}$

$\Rightarrow z = 1.7$

iv) $2.5m = 7.5$

$\Rightarrow \frac{2.5m}{2.5} = \frac{7.5}{2.5}$

$\Rightarrow m = \frac{7.5 \times 10}{2.5 \times 10}$

$\Rightarrow m = \frac{75}{25}$

$\Rightarrow m = 3$

v) $3.2p = 16$

$\Rightarrow \frac{3.2p}{3.2} = \frac{16}{3.2}$

$\Rightarrow p = \frac{16 \times 10}{3.2 \times 10}$

$\Rightarrow p = \frac{160}{32}$

$\Rightarrow p = 5$

vi) $2a = 4.6$

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

$\Rightarrow a = \frac{4.6}{2}^{2.3}$

$\Rightarrow a = 2.3$

(4) Solve:

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

$\Rightarrow \frac{x}{2} \times 2 = 5 \times 2$

$\Rightarrow x = 10$

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

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

$\Rightarrow y = -6$

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

$\Rightarrow \frac{a}{5} \times 5 = -15 \times 5$

$\Rightarrow a = -75$

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

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

$\Rightarrow z = 13$

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

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

$\Rightarrow m = 15$

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

$\Rightarrow n = -2.8 \times 7$

$\Rightarrow n = -19.6$

(5) Solve:

i) $-2n = 8$

$\Rightarrow n = \frac{-8}{2}$

$\Rightarrow n = -4$

ii) $-3.5y = 14$

$\Rightarrow y = 14 \times -3.5$

$\Rightarrow y = -49.0$

$\Rightarrow y = -49$

iii) $-5z = 4$

$\Rightarrow z = -5 \times 4$

$\Rightarrow z = -20$

iv) $-5 = a + 3$

$\Rightarrow -5 - 3 = a$

$\Rightarrow -8 = a$

$\Rightarrow a = -8$

v) $2 = p + 5$

$\Rightarrow 2 - 5 = p$

$\Rightarrow -3 = p$

$\Rightarrow p = -3$

vi) $+5 = a + 3$

$\Rightarrow -5 + 3 = a$

$\Rightarrow -2 = a$

$\Rightarrow a = -2$

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

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

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

$\Rightarrow \frac{76}{15} = x$

$\Rightarrow 5\frac{1}{15} = x$

$\Rightarrow x = 5\frac{1}{15}$

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

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

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

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

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

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

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

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

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

$\Rightarrow \frac{9}{5} = y$

$\Rightarrow y = \frac{9}{5}$

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

x) $-3.5y = 14$

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

$\Rightarrow y = \frac{+140}{35}^{4}$

$\Rightarrow y = -4$

xi) $-5z = 4$

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

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

vi) $4.5 = m - 2.7$

$\Rightarrow 4.5 + 2.7 = m$

$\Rightarrow m = 7.2$