Date.....
Page.....

Exercise - 22 (A)

1. Solve :

(i) $x+2=6$
(ii) $x+6=2$
(iii) $y+8=5$
(iv) $x+4=-3$
(v) $y+2=-8$
(vi) $b+2.5=4.2$
(vii) $p+4.6=8.5$
(viii) $y+3.2=-6.5$
(ix) $a+8.9=-12.6$
(x) $x+2\frac{1}{3}=5$
(xi) $z+2=4\frac{1}{5}$
(xii) $m+3\frac{1}{2}=4\frac{1}{4}$
(xiii) $x+2=1\frac{1}{4}$
(xiv) $y+5\frac{1}{3}=4$
(xv) $a+3\frac{1}{5}=1\frac{1}{2}$

solution :

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

Date.....
Page.....

(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) $y+2=-8$
$\Rightarrow y=-8-2$
$\Rightarrow y=-10$

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

Date.....
Page.....

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Date.....
Page.....

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

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

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

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

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

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

$\Rightarrow a = \frac{15-32}{10}$

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

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

2. solve :

(i) $x - 3 = 2$

(ii) $m - 2 = -5$

(iii) $b-5=7$

(iv) $a-2.5=-4$

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

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

(vii) $p-5.4=2.7$

(viii) $x-15=-4.9$

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

solution:

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

Date.....
Page.....

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3. solve :

(i) $3x = 12$

(ii) $2y = 9$

(iii) $5z = 8.5$

(iv) $2.5m = 7.5$

(v) $3.2p = 16$

(vi) $2a = 4.6$

solution :

Date.....
Page.....

(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) $2.5m = 7.5$

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

$\Rightarrow \frac{75}{25} \quad \Rightarrow m = 3$

(v) $3.2p = 16$

$\Rightarrow p = \frac{16}{3.2} \quad \Rightarrow p = \frac{16 \times 10}{32}$

$\Rightarrow p = 5$

(vi) $2a = 4.6$

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

$\Rightarrow a = 2.3$

4. solve

(i) $\frac{x}{2} - 5$

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

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

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

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

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

solution :

Date.....
Page.....

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

$\Rightarrow a = -15 \times 5$

$\Rightarrow -75$

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

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

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

$\Rightarrow m = 15$

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

$\Rightarrow n = -2.8 \times 7$

$\Rightarrow n = -19.6$

5. (i) $-2x = 8$

(ii) $-3.5y = 14$

(iii) $-5z = 4$

(iv) $-5 = a + 3$

(v) $2 = p + 5$

(vi) $4.5 = m - 2.7$

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

(viii) $5 = m + \frac{39}{7}$

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

Solution :

Date.....
Page.....

(i) $2x = 8$

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

$\Rightarrow x = 4$

(ii) $-3.5y = 14$

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

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

$\Rightarrow y = -4$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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