

Simple (Linear) Equations

Exercise 22 (A)

1. i) $x+2=6$

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

$$\Rightarrow x=6-2$$

$$\Rightarrow x=4$$

ii) $x+6=2$

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

$$\Rightarrow x=-4$$

iii) $y+8=5$

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

$$\Rightarrow y=-3$$

2. i) $x-3=2$

$$\Rightarrow x=2+3$$

$$\Rightarrow x=5$$

ii) $m-2=-5$

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

$$\Rightarrow m=-3$$

iii) $b-5=7$

$$\Rightarrow b=7+5$$

$$\Rightarrow b=12$$

3. i) $3x=12$

~~$$\Rightarrow 3x = \frac{12}{3}$$~~
$$\Rightarrow \frac{3x}{3} = \frac{12}{3}$$

$$\Rightarrow x=4$$

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

$\Rightarrow y = 4.5$

Homework

~~How~~
13/8/21

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

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

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

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

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

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

$\Rightarrow x = \frac{8}{3} = 2\frac{2}{3}$

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

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

$\Rightarrow z = \frac{11}{5} = 2\frac{1}{5}$

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

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

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

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

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

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

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

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

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

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

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

$\Rightarrow a = -\frac{17}{10} = -1\frac{7}{10}$

2. iv) $a - 2.5 = -4$

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

$\Rightarrow a = -1.5$

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

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

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

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

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

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

vii) $p - 5.4 = 2.7$

$\Rightarrow p = 2.7 + 5.4$

$\Rightarrow p = 8.1$

viii) $x - 1.5 = -4.9$

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

$\Rightarrow x = -3.4$

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

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

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

3. iii) $5z = 8.5$

$\Rightarrow z = 1.7$

iv) $2.5m = 7.5$

$\Rightarrow m = 3$

v) $3.2p = 16$

$\Rightarrow p = 5$

vi) $2a = 4.6$
 $\Rightarrow a = 2.3$

iv) i) $x = 5$
 $\Rightarrow x = 10$

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

iii) $a = -15$
 $\Rightarrow a = -75$

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

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

$\Rightarrow \frac{m}{6} \times 6 = \frac{21}{2} \times 6 = 15$

$\Rightarrow m = 15$

vi) $2a = 4.6$
 $\Rightarrow a = 2.3$

$\frac{n}{7} = -2.8$
 $\Rightarrow n = -19.6$

vii) $-2x = 8$
 $\Rightarrow x = -4$

viii) $-3.5y = 14$
 $\Rightarrow y = -4$

ix) $-5z = 4 \Rightarrow z = -0.8$

$$iv) -5 = a + 3$$

$$\Rightarrow a = -8$$

$$v) 2 = p + 5$$

$$\Rightarrow p = 2 - 5$$

$$\Rightarrow p = -3$$

$$vi) 4.5 = m - 2.7$$

$$\Rightarrow m = 7.2$$

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

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

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

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

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

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