

Q Linear Equations

- 3 Solve the equation.

$$x - 11 = -4$$

$$x = \dots\dots\dots [1]$$

- 3 Solve $7x - 5 = 37$.

$$x = \dots\dots\dots [2]$$

- 2 Solve the equation.

$$2x - 7 = -3$$

$$x = \dots\dots\dots [2]$$

- 6 Solve.

(a) $4x = 28$

$$x = \dots\dots\dots [1]$$

(b) $3(a - 6) = 24$

$$a = \dots\dots\dots [2]$$

4 Solve.

$$-3(1 - 4x) = 9$$

$$x = \dots\dots\dots [3]$$

6 Solve.

(a) $8x + 7 = 39$

$$x = \dots\dots\dots [2]$$

(b) $2(5y - 1) = 24$

$$y = \dots\dots\dots [3]$$

2 Solve the equation.

$$7 - 5x = -3$$

$$x = \dots\dots\dots [2]$$

6 Solve.

$$5x - 10 = 3x - 6$$

$$x = \dots\dots\dots [2]$$

5 Solve.

$$2(4x - 1) = 3(2x + 1)$$

$$x = \dots\dots\dots [3]$$

2 Solve the equation.

$$2q - 7 = 2 - 7q$$

$$q = \dots\dots\dots [2]$$

4 Solve.

(a) $5 - 2x = 0$

$x = \dots\dots\dots$ [1]

(b) $-12 + 2x = 5x - 3$

$x = \dots\dots\dots$ [2]

4 Solve.

(a) $2 - 4(5 - 2x) = 0$

$x = \dots\dots\dots$ [2]

3 Solve the equation.

$6 - 2x = 3x$

$x = \dots\dots\dots$ [2]

7 Solve.

(a) $15t + 8 = 4 - t$

$t = \dots\dots\dots$ [2]

(b) $\frac{25 - 2u}{3} = 2$

$u = \dots\dots\dots$ [2]

14 Solve the equation.

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

$x = \dots\dots\dots$ [2]

8 Solve.

(a) $\frac{30}{x} = 6$

$x = \dots\dots\dots$ [1]

(b) (i) Solve.

$$\frac{3w}{16} - 1 = \frac{1}{2}$$

$$w = \dots\dots\dots [2]$$

(d) Solve.

$$\frac{13-4x}{3} = 6-x$$

$$x = \dots\dots\dots [3]$$

15 Solve.

$$\frac{8-x}{3} = \frac{x+1}{2}$$

$$x = \dots\dots\dots [3]$$

18 Solve.

$$\frac{3y}{2y-1} = \frac{3}{4}$$

$y = \dots\dots\dots$ [3]

(b) Solve the equation.

$$\frac{2x+5}{3-x} = \frac{14}{15}$$

$x = \dots\dots\dots$ [3]

4 (a) Solve.

(i) $6(7 - 2x) = 3x - 8$

$x = \dots\dots\dots$ [3]

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

$x = \dots\dots\dots$ [3]

14 Solve $\frac{x+1}{x-1} - \frac{1}{3} = 0$.

$x = \dots\dots\dots$ [3]

(c) Solve the equations.

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

$x = \dots\dots\dots$ [4]

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

$x = \dots\dots\dots$ [3]

(b) Solve the equation.

$$\frac{x}{4} + \frac{2x}{3} = 1$$

$x = \dots\dots\dots$ [2]

- 3 (a) Geeta buys x apples, $(x + 7)$ oranges and $(2x - 1)$ bananas.
The total number of pieces of fruit Geeta buys is 30.

(i) Find the number of apples Geeta buys.

$\dots\dots\dots$ [3]

- 10** A group of 12 adults and 9 children travel on a bus.

The cost of an adult ticket is \$ n .

The cost of a child ticket is \$ $(n - 10)$.

The total cost of the tickets is \$277.50 .

Find the cost of one adult ticket.

\$ [3]

- 8 (a)** A shop sells shirts for \$ x and jackets for \$ $(x + 27)$.
The shop sells 4 shirts and 3 jackets for a total of \$194.75 .

Write down and solve an equation to find the cost of one shirt.

\$ [3]

- 18** Mrs Kohli buys a jacket, 2 shirts and a hat.
The jacket costs \$ x .
The shirts each cost \$24 less than the jacket and the hat costs \$16 less than the jacket.
Mrs Kohli spends exactly \$100.

Write down an equation in terms of x .
Solve this equation to find the cost of the jacket.

\$ [3]