

Solving linear equations and inequations

1. Solve these equations:

(a) $x + 5 = 3$ (b) $y - 4 = 1$ (c) $z + 3 = -2$ [1, 1, 1]

2. Solve these equations:

(a) $5x = 20$ (b) $3z = 15$ (c) $2y = 1$ [1, 1, 1]

3. Solve these equations:

(a) $2x - 12 = -3$ (b) $5z + 9 = 4$ (c) $6y - 9 = 2y + 5$

(d) $8k - 5 = 5k + 1$ (e) $6(a - 1) = 4(a + 2)$ (f) $6x + 11 = 9x + 2$

[2, 2, 2, 2, 3, 2]

4. Solve these equations:

(a) $7x + 7 = 5x - 11$ (b) $3x + 13 = 9 - 5x$ (c) $4x - 8 = 6x - 14$

[2, 2, 2]

5. Solve these inequations:

(a) $7x > 42$ (b) $5x - 3 \leq 22$ (c) $3x - 2 > -11$ [1, 2, 2]

[30 marks]

Changing the subject of a formula

1. Change the subject of each formula to x .

(a) $y = x - 3$

(b) $y = x + b$

(c) $y = 3x$

(d) $y = 3p + x$

[1, 1, 1, 1]

2. Make a the subject of each formula.

(a) $c = 7 + a$

(b) $g = a - 2x$

[1, 1]

3. Change the subject of the formula to x .

(a) $y = ax + b$

(b) $k = h - mx$

[2, 2]

4. Change the subject of each formula to the letter shown in brackets.

(a) $P = 6l$

(l)

(b) $V = IR$

(I)

(c) $P = 2w + 2b$

(b)

[1, 1, 2]

5. Change the subject of each formula to y .

(a) $v = \frac{1}{2}y$

(b) $c = \frac{1}{5}y$

[1, 1]

6. Make x the subject of each formula.

(a) $a = \frac{7}{x}$

(b) $m = \frac{y}{x}$

(c) $p = \frac{3}{x} - 2$

[2, 2, 3]

[23 marks]