

Equations Level 4
 S1-S3, National 4

1. Solve each of the following equations (show all steps).

a) $4x + 6 = 18$

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

c) $6x - 2 = 46$

d) $5x + 5 - 2x - 2 = 22$

e) $\frac{3}{4}x - 1 = 3$

2. Solve each of the following inequations for x.

a) $5x - 2 \leq 23$

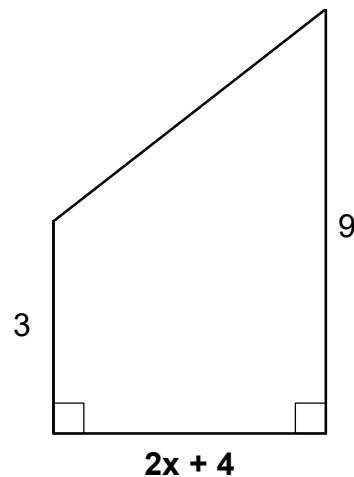
b) $6x - 3 \leq 18$

c) $5x + 14 < 8x - 1$

3. a) Write an expression for the area in terms of x

b) If the total area is 54m^2 , form an equation in x, to represent this information.

c) Solve your equation to find the value of x.



4. Solve the following basic equations.

a) $9u + 4 = 19$

b) $5r = 3r + 9$

c) $3d + 5 = d + 13$

d) $7y - 2 = 2y + 28$

e) $7v - 5 = 6v - 4$

f) $4 - 3h = 3h + 16$

5. Solve the following equations by multiplying out the bracket first.

a) $2(x + 1) = 8$

b) $4(k - 1) = 20$

c) $2(3x + 1) = 2x + 22$

d) $5y - 9 = 2(y - 15)$

e) $4 - 5(2w + 7) = 2w + 5$

f) $10 - (5t + 4) = 2t - 15$

6. Solve these equations.

a) $\frac{2}{7}(2x + 5) = 1$

b) $2 - \frac{5}{8}(3 - 2x) = 0$

c) $\frac{2}{9}(1 + 2x) = \frac{5}{6}$

d) $\frac{5}{9}x - \frac{2}{3}(1 + x) = \frac{3}{2}$

e) $\frac{2(2x - 1)}{5} = \frac{3(1 - 2x)}{7}$

f) $\frac{5(5 - 2x)}{6} - \frac{8}{5} = \frac{7(1 - x)}{15}$