

National 5: Linear Equations

Solve each equation for x .

Q1 a) $3x + 1 = 19$

d) $2 - 3x = 13$

b) $4x - 3 = -21$

e) $14 = 5x - 1$

c) $5 + 2x = -1$

f) $-8 = 11 - 3x$

Q2 a) $5x + 1 = 3x - 9$

d) $6 - x = x + 12$

b) $2x - 3 = 7x - 18$

e) $4x + 1 = x + 9$

c) $2 + 3x = -x + 14$

f) $5 - 3x = -6x + 4$

Q3 a) $2(x + 1) = 5x - 7$

d) $6x = 5 - 2(4 - x)$

b) $3(4 - 2x) + x = -13$

e) $6(x - 1) = 2(4x + 1)$

c) $3 - 2(x + 1) = 11$

f) $-2(x + 1) = 7(2 - 3x)$

Q4 a) $\frac{x}{3} = 5$

d) $\frac{x}{5} - 6 = x$

b) $\frac{x}{5} + 1 = x - 7$

e) $5x - 1 = \frac{x}{4}$

c) $\frac{2x}{3} = x + 4$

f) $4 - \frac{3x}{2} = 2x$

Q5 a) $\frac{x}{4} = \frac{3}{2}$

d) $\frac{2x+3}{2} = \frac{x}{3}$

b) $\frac{3x}{5} = -\frac{1}{4}$

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

c) $\frac{x+1}{6} = \frac{2}{3}$

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

Q6 a) $\frac{x}{5} - 2 = \frac{x}{4}$

d) $\frac{x}{5} + \frac{x}{4} = 3$

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

e) $x - \frac{2}{3} = \frac{x}{4}$

c) $2 - \frac{3x}{4} = -4x$

f) $\frac{4x}{3} = x + \frac{1}{5}$

Q7 a) $\frac{2x+3}{2} - 1 = \frac{x}{3}$

d) $\frac{7x}{2} + \frac{2x+1}{3} = 1$

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

e) $2x - \frac{4}{7} = \frac{2x+3}{2}$

c) $1 + \frac{5+3x}{4} = 2x$

f) $\frac{3-x}{2} = x - \frac{3}{4}$