

LINEAR EQUATIONS WORKSHEET #1

Exercise 1

1 Solve for x :

a $x + 9 = 4$ **b** $5x = 45$ **c** $-24 = -6x$ **d** $3 - x = 12$
e $2x + 5 = 17$ **f** $3x - 2 = -14$ **g** $3 - 4x = -17$ **h** $8 = 9 - 2x$

2 Solve for x :

a $\frac{x}{4} = 12$ **b** $\frac{1}{2}x = 6$ **c** $5 = \frac{x}{-2}$ **d** $\frac{x}{3} + 4 = -2$
e $\frac{x+3}{5} = -2$ **f** $\frac{1}{3}(x+2) = 3$ **g** $\frac{2x-1}{3} = 7$ **h** $\frac{1}{2}(5-x) = -2$

Exercise 2

1 Solve for x :

a $2(x+8) + 5(x-1) = 60$ **b** $2(x-3) + 3(x+2) = -5$
c $3(x+3) - 2(x+1) = 0$ **d** $4(2x-3) + 2(x+2) = 32$
e $3(4x+1) - 2(3x-4) = -7$ **f** $5(x+2) - 2(3-2x) = -14$

2 Solve for x :

a $2x - 3 = 3x + 6$ **b** $3x - 4 = 5 - x$
c $4 - 5x = 3x - 8$ **d** $-x = 2x + 4$
e $12 - 7x = 3x + 7$ **f** $5x - 9 = 1 - 3x$
g $4 - x - 2(2-x) = 6 + x$ **h** $5 - 3(1-x) = 2 - 3x$
i $5 - 2x - (2x+1) = -6$ **j** $3(4x+2) - x = -7 + x$

3 Solve for x :

a $2(3x+1) - 3 = 6x - 1$ **b** $3(4x+1) = 6(2x+1)$
c Comment on your solutions to **a** and **b**.

4 Solve for x :

a $6 + 2x = 15 - x$ **b** $3x + 7 = 15 - x$ **c** $5 + x = 11 - 2x$
d $17 - 3x = 4 - x$ **e** $8 - x = x + 6$ **f** $9 - 2x = 3 - x$

5 Solve for x :

a $2(x+4) - x = 8$ **b** $5(2-3x) = -8 - 6x$ **c** $3(x+2) - x = 12$
d $2(x+1) + 3(x-4) = 5$ **e** $4(2x-1) + 9 = 3x$ **f** $11x - 2(x-1) = -5$
g $3x - 2(x+1) = -7$ **h** $8 - (2-x) = 2x$ **i** $5x - 4(4-x) = x + 12$
j $4(x-1) = 1 - (3-x)$ **k** $3(x-6) + 7x = 5(2x-1)$ **l** $3(2x-4) = 5x - (12-x)$

Exercise 3

1 Solve for x :

a $\frac{x}{2} = \frac{4}{7}$ **b** $\frac{5}{8} = \frac{x}{6}$ **c** $\frac{x}{2} = \frac{x-2}{3}$
d $\frac{x+1}{3} = \frac{2x-1}{4}$ **e** $\frac{2x}{3} = \frac{5-x}{2}$ **f** $\frac{3x+2}{5} = \frac{2x-1}{2}$
g $\frac{2x-1}{3} = \frac{4-x}{6}$ **h** $\frac{4x+7}{7} = \frac{5-x}{2}$ **i** $\frac{3x+1}{6} = \frac{4x-1}{-2}$

2 Solve for x :

a $\frac{5}{x} = \frac{2}{3}$ **b** $\frac{6}{x} = \frac{3}{5}$ **c** $\frac{4}{3} = \frac{5}{x}$ **d** $\frac{3}{2x} = \frac{7}{6}$
e $\frac{3}{2x} = \frac{7}{3}$ **f** $\frac{7}{3x} = -\frac{1}{6}$ **g** $\frac{5}{4x} = -\frac{1}{12}$ **h** $\frac{4}{7x} = \frac{3}{2x}$

3 Solve for x :

a $\frac{2x+3}{x+1} = \frac{5}{3}$ **b** $\frac{x+1}{1-2x} = \frac{2}{5}$ **c** $\frac{2x-1}{4-3x} = -\frac{3}{4}$
d $\frac{x+3}{2x-1} = \frac{1}{3}$ **e** $\frac{4x+3}{2x-1} = 3$ **f** $\frac{3x-2}{x+4} = -3$
g $\frac{6x-1}{3-2x} = 5$ **h** $\frac{5x+1}{x+4} = 4$ **i** $2 + \frac{2x+5}{x-1} = -3$

4 Solve for x :

a $\frac{x}{2} - \frac{x}{6} = 4$ **b** $\frac{x}{4} - 3 = \frac{2x}{3}$
c $\frac{x}{8} + \frac{x+2}{2} = -1$ **d** $\frac{x+2}{3} + \frac{x-3}{4} = 1$
e $\frac{2x-1}{3} - \frac{5x-6}{6} = -2$ **f** $\frac{x}{4} = 4 - \frac{x+2}{3}$
g $\frac{2x-7}{3} - 1 = \frac{x-4}{6}$ **h** $\frac{x+1}{3} - \frac{x}{6} = \frac{2x-3}{2}$
i $\frac{x}{5} - \frac{2x-5}{3} = \frac{3}{4}$ **j** $\frac{x+1}{3} + \frac{x-2}{6} = \frac{x+4}{12}$
k $\frac{x-6}{5} - \frac{2x-1}{10} = \frac{x-1}{2}$ **l** $\frac{2x+1}{4} - \frac{1-4x}{2} = \frac{3x+7}{6}$