

**Steps for solving equations:**

- 1 Expand brackets.
- 2 Collect x terms on one side of equation.
- 3 Collect numbers on the other side.
- 4 Divide by the number in front of x.  
*Remember to change signs when you move something over the = sign.*

**Exercise 1**

Solve the following equations, you just have to divide both sides by the number in front of x.

1  $3x = 12$

2  $4x = 28$

3  $2x = -7$

4  $5x = 15$

5  $3x = 13$

6  $6x = 19$

7  $4x = 11$

8  $7x = 38$

9  $2x = 1$

10  $5x = -6$

**Exercise 2**

1  $3x + 6 = 18$

2  $4x + 5 = 26$

3  $2x - 3 = 7$

4  $6x - 12 = 20$

5  $3 + 4x = 27$

6  $7x + 15 = 8$

7  $3x - 6 = -17$

8  $5x - 1 = 3$

9  $8x + 6 = 6$

10  $12x + 1 = 40$

**Exercise 3**

More care is needed in this exercise as there are x terms and numbers on both sides.

1  $5x + 7 = 19 + 3x$

2  $8x + 5 = 2x + 29$

3  $7 + 3x = 17 + x$

4  $6x - 12 = 2x + 20$

5  $4x - 18 = x + 5$

6  $7x - 15 = 4x - 8$

7  $3x - 6 = 17 - 2x$

8  $5x - 1 = 3x$

9  $8x - 6 + 2x = 13 + 5x$

10  $7x - 9 = 3x - 45$

**Exercise 4**

Remember you must expand brackets first.

1  $5(x + 2) = 3x + 19$

2  $3(x + 7) = x + 25$

3  $4(x - 3) = 15 + x$

4  $6(x - 1) = 2x + 20$

5  $7(x - 3) = 2(x + 5)$

6  $5(x - 4) = 2(x - 8)$

7  $6x - 6 = 2(x + 12)$

8  $9(x - 2) = 3(x - 1)$

9  $8(x - 3) + 2x = 9 + 3x$

10  $4(x + 5) - 12 = 2(x + 3) + 16$