NA35 Equivalent number sentences

1 Keep the number sentence balanced as you work out the missing number.
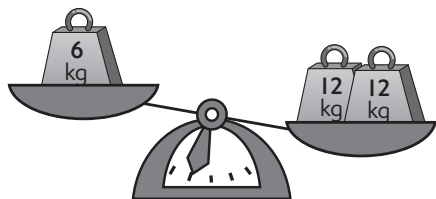
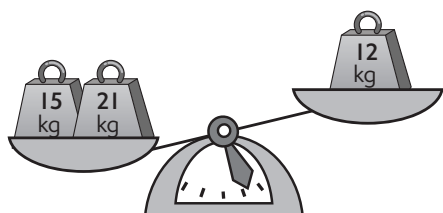**a** When a number is added to 10 the answer is the same as 34 minus 3.

b When a number is added to 100 the answer is the same as 80 plus 35.
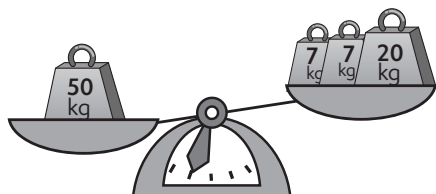
c When a number is added to 50 it is the same as 6 multiplied by 9.

d When a number is added to 20 it is the same as 30 plus 3.

2 How much must be added to the lighter side to make the scales balance?

3 Jon's luggage weighs 23 kg and 7 kg, and is the same total mass as Ben's luggage.

How much does Ben's small bag weigh if the large suitcase weighs 19 kg?

NA35 Equivalent number sentences

1 Keep the number sentence balanced as you work out the missing number.

a When a number is added to 10 the answer is the same as 34 minus 3.

$$\square + 10 = 34 - 3$$
$$\square + 10 = 31$$
$$\square + 10 + 10 = 31 - 10$$
$$\square = 21$$
$$\boxed{21} + 10 = 34 - 3$$

b When a number is added to 100 the answer is the same as 80 plus 35.

$$\square + 100 = 80 + 35$$
$$\square + 100 = 115$$
$$\square + 100 + 100 = 115 - 100$$
$$\square = 15$$
$$\boxed{15} + 100 = 80 + 35$$

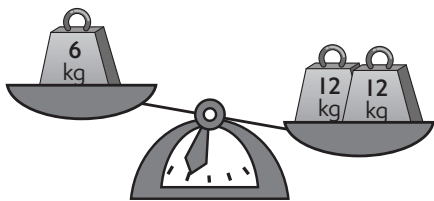**c** When a number is added to 50 it is the same as 6 multiplied by 9.

$$\square + 50 = 6 \times 9$$
$$\square + 50 = 54$$
$$\square + 50 + 50 = 54 - 50$$
$$\square = 4$$
$$\boxed{4} + 50 = 6 \times 9$$

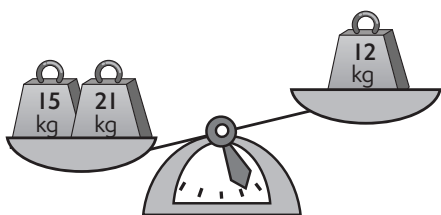**d** When a number is added to 20 it is the same as 30 plus 3.

$$\square + 20 = 30 + 3$$
$$\square + 20 = 33$$
$$\square + 20 + 20 = 33 - 20$$
$$\square = 13$$
$$\boxed{13} + 20 = 30 + 3$$

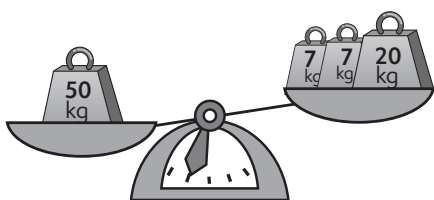**2** How much must be added to the lighter side to make the scales balance?

$$\square + 6 = 12 + 12$$
$$\square + 6 = 24$$
$$\square + 6 + 6 = 24 - 6$$
$$\square = 18$$
$$\boxed{18} + 6 = 12 + 12$$

$$15 + 21 = 12 + \square$$
$$36 = 12 + \square$$
$$36 - 12 = 12 - 12 + \square$$
$$24 = \square$$
$$15 + 21 = 12 + \boxed{24}$$

$$50 = 7 + 7 + 20 + \square$$
$$50 = 34 + \square$$
$$50 - 34 = 34 - 34 + \square$$
$$16 = \square$$
$$50 = 7 + 7 + 20 + \boxed{16}$$

3 Jon's luggage weighs 23 kg and 7 kg, and is the same total mass as Ben's luggage.

How much does Ben's small bag weigh if the large suitcase weighs 19 kg?   **11 kg**