Division using repeated subtraction

One way of dividing is to think of it as **repeated subtraction**.

For example, look at the question 20 ÷ 5:

Subtract 5	20 – 5 = 15
Subtract 5 again	15 – 5 = 10
Subtract 5 again	10 – 5 = 5
Subtract 5 again	5 – 5 = 0

Count the total number of times you subtracted 5. In this question it was **4 times**. As the final number after all the subtractions is 0, the 5 divides into 20 exactly with no remainder.

20 ÷ 5 = **4**

Here's another example, 25 ÷ 6:

Subtract 6	25 – 6 = 19
Subtract 6 again	19 – 6 = 13
Subtract 6 again	13 – 6 = 7
Subtract 6 again	7 – 6 = 1

You can't subtract another 6 as there is only 1 left. This is the remainder. 6 was subtracted **4 times**, but you have a **remainder, 1**.

25 ÷ 6 = **4 remainder 1**

Using multiples with repeated subtraction (known as chunking)

You can also combine this method with using multiples, such as multiples of 10, as a shortcut.

For example, 400 ÷ 8

As 400 is divisible exactly by 10 you could subtract a multiple of 8 instead of 8. For example, you could repeatedly subtract 10 × 8 (80):

Subtract 80	400 – 80 = 320
Subtract 80	320 – 80 = 240
Subtract 80	240 – 80 = 160
Subtract 80	160 – 80 = 80
Subtract 80	80 – 80 = 0

Add the total number of 8s subtracted, which is 10 + 10 + 10 + 10 + 10. A total of 50 8s have been subtracted with no remainder.

400 ÷ 8 = **50**