Division Knowledge Organiser

Maths

mathematical symbols

÷	divide, shared into groups of	=	is equal to

dividing by 10

When you divide by 10, the number becomes 10 times smaller.

253 ÷ 10 = 25.3

We move the digit one place to the right.
2 hundreds ÷ 10 = 2 tens (20)

H	T	O	t
2	5	3	
	2	5	3

The 5 tens become 5 ones and we move the 3 ones into the tenths column (after the decimal point).

dividing by 100 and 1000

7500 ÷ 100 = 75

When dividing by 100, digits move two places to the right.

Th	H	T	O
7	5	0	0
		7	5

2100 ÷ 1000 = 2.1

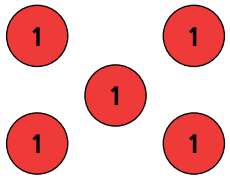
When dividing by 1000, digits move three places to the right.

Th	H	T	O	.	t
2	1	0	0	.	
			2	.	1

dividing by 1

When you divide by 1, the answer remains the same.

5 ÷ 1 = 5
5 divided by 1 = 5



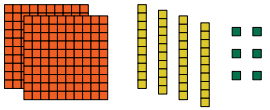
halving

Halving is the same as dividing by 2.

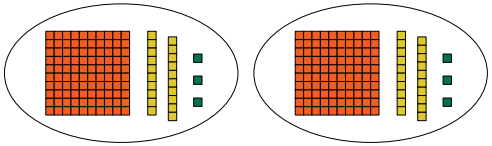
halve 246

246 ÷ 2

use apparatus



divide into 2 equal groups



bar model

123	123
246	

partition it

halve 246 = 123

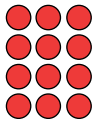
halve 200 = 100

halve 40 = 20

halve 6 = 3

factors

Factors are the numbers multiplied together to get a given number.



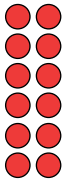
Factors of 12

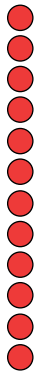
3 x 4 = 12

2 x 6 = 12

1 x 12 = 12

1, 2, 3, 4, 6 and 12 are all factors of 12.





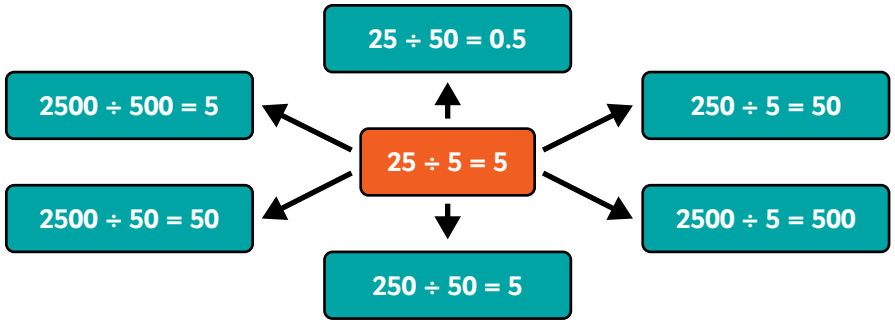
Factors also tell us which numbers that can be divided exactly into a given number.

12 ÷ 4 = 3
12 ÷ 3 = 4
12 ÷ 6 = 2
12 ÷ 2 = 6
12 ÷ 1 = 12
12 ÷ 12 = 1

mental methods

Can I work it out in my head, with apparatus or with jottings?

related facts



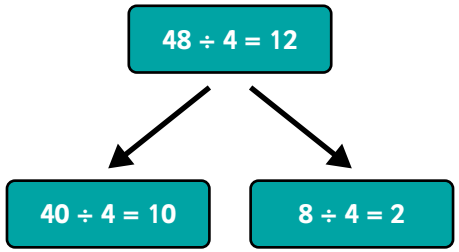
partition it

48 ÷ 4 = 12

40 ÷ 4 = 10

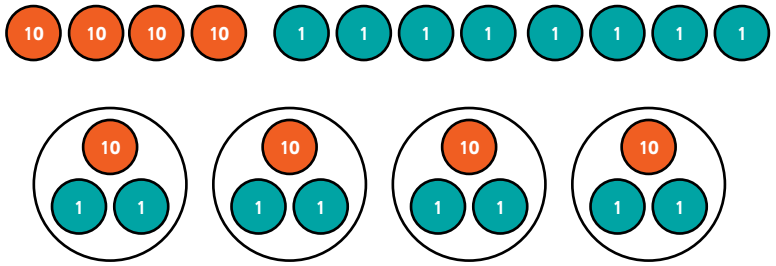
8 ÷ 4 = 2

part-whole model



use apparatus

48 ÷ 4 = 12



use your times tables knowledge

How many nines are in 81?

81 ÷ 9 = 9

1 x 9 = 9
2 x 9 = 18
3 x 9 = 27
4 x 9 = 36
5 x 9 = 45
6 x 9 = 54
7 x 9 = 63
8 x 9 = 72
9 x 9 = 81
10 x 9 = 90
11 x 9 = 99
12 x 9 = 108

How many sixes are in 48?

48 ÷ 6 = 8

1 x 6 = 6
2 x 6 = 12
3 x 6 = 18
4 x 6 = 24
5 x 6 = 30
6 x 6 = 36
7 x 6 = 42
8 x 6 = 48
9 x 8 = 54
10 x 6 = 60
11 x 6 = 66
12 x 6 = 72

written methods

Do I need to use a formal written method?

With this written method we start at the left column.