Multiplication and Division Knowledge Organiser

Counters

1   10   100
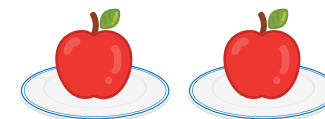
Base 10

Bar model

10 x 5	5	5	5	5	5	5	5	5	5	5

5 x 10	10	10	10	10	10

Multiply by 1 and 0

When you multiply any number by 1, it will equal the number you started with.

$2 \times 1 = 2$

When you multiply by 0, the answer will always be 0.

$2 \times 0 = 0$

Multiply by 10 and 100

Th	H	T	O	Tenth	Hundredth
		3	5		
	3	5	0		
3	5	0	0		

35 x 10 = 350

35 x 100 = 3500

x10 move digits **1** place to the **left**

x100 move digits **2** places to the **left**

←————————————→

Divide by 10 and 100

Th	H	T	O	Tenth	Hundredth
		3	5		
			3	5	
			0	3	5

35 ÷ 10 = 3.5

35 ÷ 100 = 0.35

÷10 move digits **1** place to the **right**

÷100 move digits **2** place to the **right**

————————————→

Divide a number by 1 and itself

When you divide any number by 1, it will equal the number you started with.

$2 \div 1 = 2$

When you divide a number by itself, the answer will always be 1.

$2 \div 2 = 1$

Multiplication and Division Knowledge Organiser

Maths

Multiplication and division facts up to 12 x 12
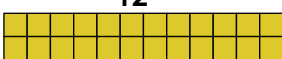
Example:

$$2 \times 3 = 6 \qquad 3 \times 2 = 6$$
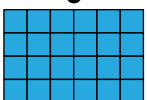
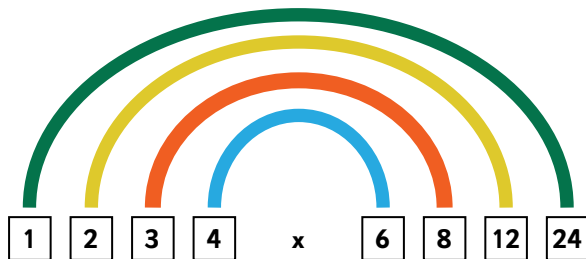$$6 \div 2 = 3 \qquad 6 \div 3 = 2$$

Factor pairs

Factor pairs of 24 = numbers that multiply together to make 24

24
1 — 1 x 24

12
2 — 2 x 12

8
3 — 3 x 8

6
4 — 4 x 6

| 1 | 2 | 3 | 4 | x | 6 | 8 | 12 | 24 |

Multiply 2 and 3 digits by 1 digit – written method

325 x 3

1) Multiply the ones x ones (5 x 3 =15 ones)
2) Exchange the one ten into the tens column
3) Multiply the ones x tens (3 x 2 (tens) = 6 tens)
4) Add the exchanged 10 (6 + 1 = 7 tens)
5) Multiply the ones x hundreds (3 x 3 (hundreds) = 9 hundreds)

Hundreds	Tens	Ones
100 100 100	10 10	1 1 1 1 1
100 100 100	10 10	1 1 1 1 1
100 100 100	10 10	1 1 1 1 1

10

H	T	O
	3	2	5
x			3
9	7	5
	1		

Divide 2 and 3 digits by 1 digit – sharing into equal groups

484 ÷ 4 = 121

Hundreds	Tens	Ones
100	10 10	1
100	10 10	1
100	10 10	1
100	10 10	1

484 ÷ 4 =

400 ÷ 4 = 100

80 ÷ 4 = 20

4 ÷ 4 = 1