

Multiplication and Division Knowledge Organiser

Maths

Counters

Base 10

Bar model

10×5

5	5	5	5	5	5	5	5	5	5
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 5×10

10	10	10	10	10
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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		

$35 \times 10 = 350$
 $35 \times 100 = 3500$

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

$35 \div 10 = 3.5$
 $35 \div 100 = 0.35$

÷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.

$2 \div 2 = 1$

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Multiplication and division facts up to 12 x 12

Example:

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

Factor pairs

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

1×24
 2×12
 3×8
 4×6

Multiply 2 and 3 digits by 1 digit – written method

325×3

- Multiply the ones x ones ($5 \times 3 = 15$ ones)
- Exchange the one ten into the tens column
- Multiply the ones x tens (3×2 (tens) = 6 tens)
- Add the exchanged 10 ($6 + 1 = 7$ tens)
- Multiply the ones x hundreds (3×3 (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

	H	T	O
	3	2	5
x			3
	9	7	5

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

$484 \div 4 = 121$

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

$484 \div 4 =$
 $400 \div 4 = 100$ $80 \div 4 = 20$ $4 \div 4 = 1$