

Multiplication and Division KO

$3 \times 2 =$ times tables	\times multiply by	\div divide by
array	fact families $7 + 9 = 16$ $9 + 7 = 16$ $16 - 7 = 9$ $16 - 9 = 7$	regrouping
\times times by	share	remainder
groups of	lots of	factor
multiple	product	commutative

Multiplication and Division Facts

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Multiplying by 10 and 100

Use place value to work out how to multiply by 10.

$25 \times 10 = ?$

If you multiply a number by 10, the digits move one place value to the left.



Zeros will be added after the digits have moved.
 $25 \times 10 = 250$

Use place value to work out how to multiply by 100.

$25 \times 100 = ?$

If you multiply a number by 100, the digits move two place values to the left.



Zeros will be added after the digits have moved.
 $25 \times 100 = 2500$

Dividing by 10 and 100

Use place value to work out how to divide by 10.

$2500 \div 10 = ?$

If you divide a number by 10, the digits move one place value to the right.



Zeros will be added after the digits have moved.
 $2500 \div 10 = 250$

Use place value to work out how to divide by 100.

$2500 \div 100 = ?$

If you divide a number by 100, the digits move two place values to the right.



Zeros will be added after the digits have moved.
 $2500 \div 100 = 25$

multiplication



- lots of
- times
- multiply
- groups of
- product
- multiplied by
- multiple of
- repeated addition
- array

What is... lots of...?
What is the product of... and...?
What is... times...?
What is... group of...?
What is... multiplied by...?

division



- divide
- divided by
- divided into
- share
- share equally
- equal groups of

What is... divided by...?
What is... shared by...?
How many groups of... are in...?

Factor pairs and Commutativity

20

$5 \times 4 = 20$

$4 \times 5 = 20$

The factors of 20 are 1, 2, 4, 5, 10 and 20.
The factor pairs are:

1 and 20 2 and 10 4 and 5

Mental Calculations for Solving Problems

$(2 \times 3) \times 4 = 24$

$(2 \times 4) \times 3 = 24$

$(3 \times 4) \times 2 = 24$

16×3

10×3 6×3

$30 + 18 = 48$

Multiply Using Formal Written Methods

Th	H	T	O
	5	4	3
\times			4
		1	2
	1	6	0
	2	0	0
	2	1	7
			2

(4×3)
 (4×40)
 (4×500)

Th	H	T	O
	5	4	3
\times			4
			2
	2	1	7
			2
	1	1	

Remember to move any regrouped numbers into the next column. After the next multiplication, add the regrouped number to the answer.

Short Division Method

$69 \div 3 = 23$

3 $\overline{) 69}$

23	69	23
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