



# Multiplication and Division

## Y4

### Knowledge

- Written methods
- Multiply by 1 and 0
- Divide by 1
- Multiply and divide by 6
- 6 times table and division facts
- Multiply and divide by 9
- 9 times table and division facts
- Multiply and divide by 7
- 7 times table and division facts
- 11 and 12 times table
- Factor pairs
- Efficient multiplication

### Skills

- Multiply 2-digits by 1-digit
- Multiply 3-digits by 1-digit
- Divide 2-digits by 1-digit
- Divide 3-digits by 1-digit
- Multiply by 10
- Multiply by 100
- Divide by 10
- Divide by 100
- Multiply 3 numbers
- Correspondence problems

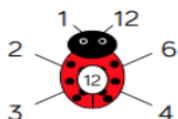
### Vocabulary

Times tables, multiply by, divide by, array, bus stop, fact families, regrouping, groups, remainder, multiple, share, factor

### Factors

A factor is a whole number that multiplies with another number to make a product.

$$\text{Factor} \times \text{Factor} = \text{Product}$$

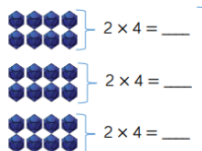


The factors of 12 are 1, 2, 3, 4, 6, 12.

$$1 \times 12 = 12 \quad 2 \times 6 = 12 \quad 3 \times 4 = 12$$

### Multiplying three numbers

$$3 \times 2 \times 4 =$$



Find the answer to 2 x 4 and then multiply that by 3 to get the answer.

$$2 \times 4 = 8$$

$$3 \times 8 = 24$$

### Multiply by 10 and 100

H	T	O
		4
	←	
		4
←		

$$4 \times 10 = 40$$

When multiplying by 10, all digits move 1 space up the place value grid. This makes the number 10 times bigger.

$$4 \times 100 = 400$$

When multiplying by 100, all digits move 2 spaces up the place value grid. This makes the number 100 times bigger.

### Divide by 10 and 100

H	T	O
6		0
→	0	
6		0
→	0	→

$$600 \div 10 = 60$$

When dividing by 10, the digits move 1 space down the place value grid. This makes the number 10 times smaller.

$$600 \div 100 = 6$$

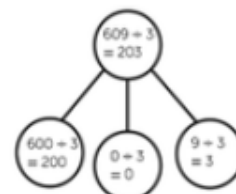
When dividing by 100, the digits move 2 spaces down the place value grid. This makes the number 100 times smaller.

### Multiplication Methods

234	×	6	=	
2		3		4
×		6		
1		0		4
		2		

$$234 \div 6 = 39$$

Hundreds	Tens	Ones
2	3	4
0	0	0
0	0	0
0	0	0



$$27 \times 4 = 108$$

27	×	4	
2		8	(7x4)
8		0	(20x4)
1		0	8

### Division Methods

### Times tables

4	2	1	0	3	9
2	6	2	2	3	5
8	4	2	2	3	5

1x table	2x table	3x table	4x table	5x table	6x table
1x1=1	1x2=2	1x3=3	1x4=4	1x5=5	1x6=6
2x1=2	2x2=4	2x3=6	2x4=8	2x5=10	2x6=12
3x1=3	3x2=6	3x3=9	3x4=12	3x5=15	3x6=18
4x1=4	4x2=8	4x3=12	4x4=16	4x5=20	4x6=24
5x1=5	5x2=10	5x3=15	5x4=20	5x5=25	5x6=30
6x1=6	6x2=12	6x3=18	6x4=24	6x5=30	6x6=36
7x1=7	7x2=14	7x3=21	7x4=28	7x5=35	7x6=42
8x1=8	8x2=16	8x3=24	8x4=32	8x5=40	8x6=48
9x1=9	9x2=18	9x3=27	9x4=36	9x5=45	9x6=54
10x1=10	10x2=20	10x3=30	10x4=40	10x5=50	10x6=60
11x1=11	11x2=22	11x3=33	11x4=44	11x5=55	11x6=66
12x1=12	12x2=24	12x3=36	12x4=48	12x5=60	12x6=72
7x table	8x table	9x table	10x table	11x table	12x table
1x7=7	1x8=8	1x9=9	1x10=10	1x11=11	1x12=12
2x7=14	2x8=16	2x9=18	2x10=20	2x11=22	2x12=24
3x7=21	3x8=24	3x9=27	3x10=30	3x11=33	3x12=36
4x7=28	4x8=32	4x9=36	4x10=40	4x11=44	4x12=48
5x7=35	5x8=40	5x9=45	5x10=50	5x11=55	5x12=60
6x7=42	6x8=48	6x9=54	6x10=60	6x11=66	6x12=72
7x7=49	7x8=56	7x9=63	7x10=70	7x11=77	7x12=84
8x7=56	8x8=64	8x9=72	8x10=80	8x11=88	8x12=96
9x7=63	9x8=72	9x9=81	9x10=90	9x11=99	9x12=108
10x7=70	10x8=80	10x9=90	10x10=100	10x11=110	10x12=120
11x7=77	11x8=88	11x9=99	11x10=110	11x11=121	11x12=132
12x7=84	12x8=96	12x9=108	12x10=120	12x11=132	12x12=144