



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

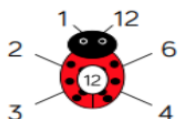
Vocabulary

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.

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

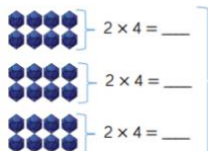


The factors of 12 are 1, 2, 3, 4, 6, 12.

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

Multiplying three numbers

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



$$3 \times 2 \times 4 = 3 \times 8 =$$

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

$$\begin{array}{r} 27 \\ \times 4 \\ \hline 108 \end{array}$$

$$234 \times 6 =$$

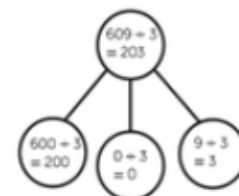
	H	T	O
	2	3	4
x			6
	1	4	0
	2	2	

$$27 \times 4 = 108$$

$$\begin{array}{r} 27 \\ \times 4 \\ \hline 108 \end{array} \begin{array}{l} (7 \times 4) \\ (20 \times 4) \end{array}$$

$$234 \div 6 = 39$$

Hundreds	Tens	Ones
200		30
30		9



Division Methods

Times tables

$$\begin{array}{r} 421 \\ 2 \overline{) 842} \\ \underline{4} \\ 4 \\ \underline{2} \\ 2 \\ \underline{0} \\ 0 \\ \underline{0} \\ 0 \end{array} \quad \begin{array}{r} 039 \\ 6 \overline{) 2354} \\ \underline{12} \\ 11 \\ \underline{12} \\ 11 \\ \underline{12} \\ 11 \\ \underline{12} \\ 11 \\ \underline{12} \\ 11 \end{array}$$

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