Learning Objectives

- To be able to recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
- To write and calculate mathematical statements
- To multiply two-digit numbers by one-digit numbers
- To be able to use mental calculations for multiplication
- To be able to use formal written methods for multiplication
- To divide two-digit numbers by one digit
- To be able to solve missing number multiplication problems
- To be able to solve missing number division problems
- To be able to solve positive integer scaling problems

3 x Tables

1 × 3 = 3	3 ÷ 3 = 1
2 × 3 = 6	6 ÷ 3 = 2
3 × 3 = 9	9 ÷ 3 = 3
4 × 3 = 12	12 ÷ 3 = 4
5 × 3 = 15	15 ÷ 3 = 5
6 × 3 = 18	18 ÷ 3 = 6
7 × 3 = 21	21 ÷ 3 = 7
8 × 3 = 24	24 ÷ 3 = 8
9 × 3 = 27	27 ÷ 3 = 9
10 × 3 = 30	30 ÷ 3 = 10
11 × 3 = 33	33 ÷ 3 = 11
12 × 3 = 36	36 ÷ 3 = 12

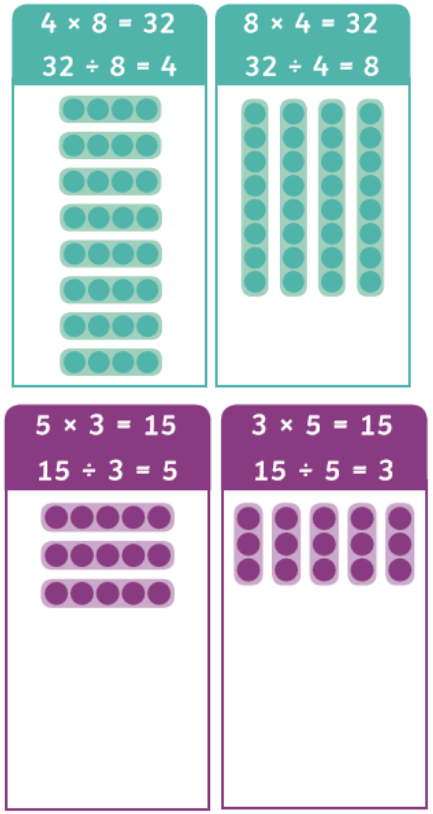
4 x Tables

1 × 4 = 4	4 ÷ 4 = 1
2 × 4 = 8	8 ÷ 4 = 2
3 × 4 = 12	12 ÷ 4 = 3
4 × 4 = 16	16 ÷ 4 = 4
5 × 4 = 20	20 ÷ 4 = 5
6 × 4 = 24	24 ÷ 4 = 6
7 × 4 = 28	28 ÷ 4 = 7
8 × 4 = 32	32 ÷ 4 = 8
9 × 4 = 36	36 ÷ 4 = 9
10 × 4 = 40	40 ÷ 4 = 10
11 × 4 = 44	44 ÷ 4 = 11
12 × 4 = 48	48 ÷ 4 = 12

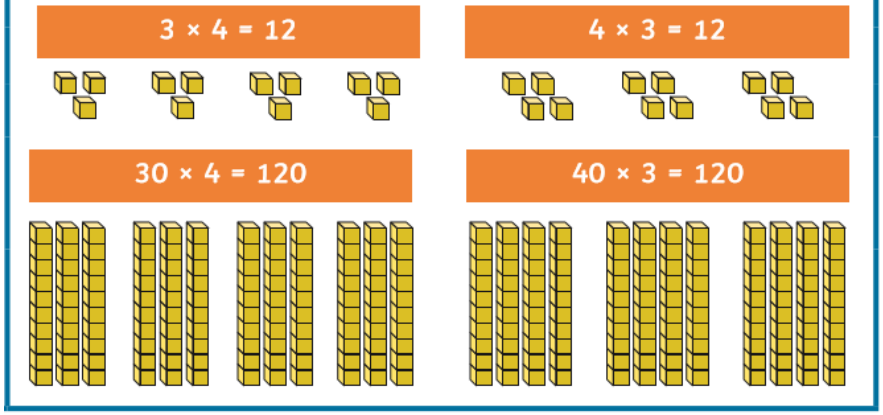
8 x Tables

1 × 8 = 8	8 ÷ 8 = 1
2 × 8 = 16	16 ÷ 8 = 2
3 × 8 = 24	24 ÷ 8 = 3
4 × 8 = 32	32 ÷ 8 = 4
5 × 8 = 40	40 ÷ 8 = 5
6 × 8 = 48	48 ÷ 8 = 6
7 × 8 = 56	56 ÷ 8 = 7
8 × 8 = 64	64 ÷ 8 = 8
9 × 8 = 72	72 ÷ 8 = 9
10 × 8 = 80	80 ÷ 8 = 10
11 × 8 = 88	88 ÷ 8 = 11
12 × 8 = 96	96 ÷ 8 = 12

Multiplication and Division Facts



Related Calculations



Efficient Methods

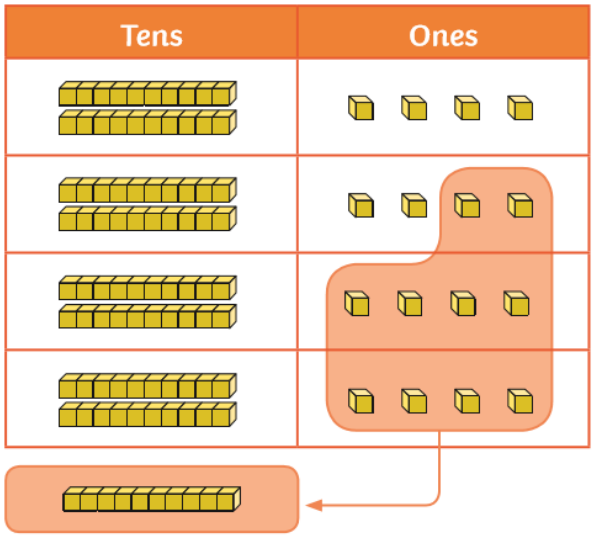
Pupils understand that multiplication is commutative (can be performed in any order) and use this to calculate efficiently.

4 x 12 x 5
can be rearranged into
4 x 5 x 12

4 x 5 = 20.

Then, calculate 20 x 12 = 240

Key Vocabulary
multiply
times
groups of
lots of
array
divide
share
fact families
regrouping
multiplication
division
multiple
commutative

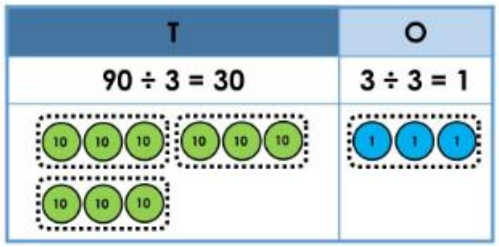


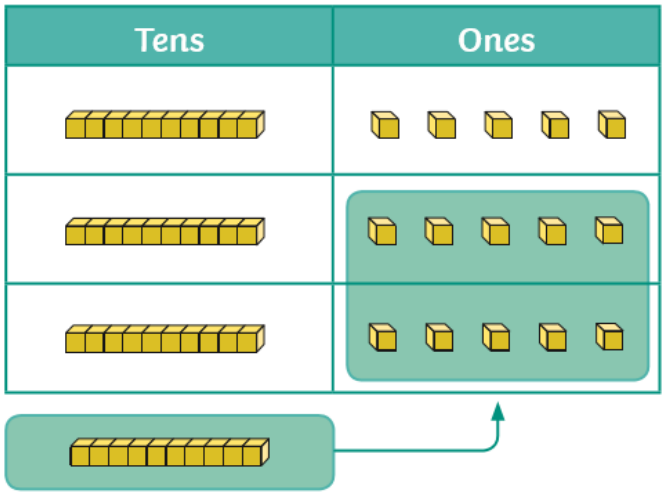
Division

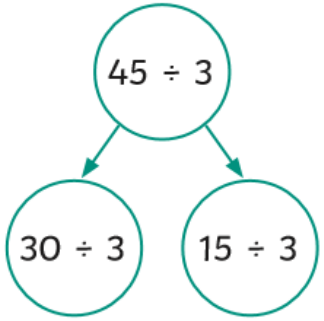
Pupils use place value counters to calculate larger division statements.

When calculating ***93 ÷ 3 = 31****, the tens and ones are divided into groups of 3.*

T	O
90 ÷ 3 = 30	3 ÷ 3 = 1







	1	5
3	4	¹5

Multiplication Written Methods

24 × 4 = 96

	T	O
	2	4
×		4
	9	6
	1	

Two by One-Digit Multiplication

Pupils build on their knowledge of arrays from YR2 and apply this to multiplying larger numbers.

"To multiply ***18 x 4****, I first I partition* ***18*** *into* ***10*** *and* ***8*** *then multiply both numbers by* ***4****. Finally, I find the total of both arrays, 72."*

T	O
10 x 4	8 x 4

10 x 4 = 40 **8 x 4 = 32**

14 x 8 = 112

×	10	4
8	80	32

What I Should Already Know:

- How to recall and use multiplication and division facts for the 2, 5 and 10 times tables
- What odd and even numbers are
- How to calculate mathematical statements using the symbols for multiplication, division and equals
- How to use arrays and repeated addition
- How to solve problems involving multiplication and division
- How to count in multiples of 2, 3, 5 and 10
- That multiplication of 2 numbers can be done in any order, but division cannot