Year 3 - Multiplication and Division

Key vocabulary

Multiplication	Division
Multiply	Divide
Commutative Law	Efficient
Commutative	Operation

Multiplication - Written Method

	3	7
×		5
1	8	5
	3	

Using columns, begin with the ones column. 5 x 7 = 35. You exchange 30 ones for 3 tens and place this under the tens column and add this on your next calculation.

Multiplication Facts

3x Table	4x Table	8x Table
0 x 3 = 0	0 x 4 = 0	0 x 8 = 0
1 x 3 = 3	1 x 4 = 4	1 x 8 = 8
2 x 3 = 6	2 x 4 = 8	2 x 8 = 16
3 x 3 = 9	3 x 4 = 12	3 x 8 = 24
4 x 3 = 12	4 x 4 = 16	4 x 8 = 32
5 x 3 = 15	5 x 4 = 20	5 x 8 = 40
6 x 3 = 18	6 x 4 = 24	6 x 8 = 48
7 x 3 = 21	7 x 4 = 28	7 x 8 = 56
8 x 3 = 24	8 x 4 = 32	8 x 8 = 64
9 x 3 = 27	9 x 4 = 36	9 x 8 = 72
10 x 3 = 30	10 x 4 = 40	10 x 8 = 80
11 x 3 = 33	11 x 4 = 44	11 x 8 = 88
12 x 3 = 36	12 x 4 = 48	12 x 8 = 96

Division Facts

3x Table	4x Table	8x Table
0 ÷ 3 = 0	0 ÷ 4 = 0	0 ÷ 8 = 0
3 ÷ 3 = 1	4 ÷ 4 = 1	8 ÷ 8 = 1
6 ÷ 3 = 2	8 ÷ 4 = 2	16 ÷ 8 = 2
9 ÷ 3 = 3	12 ÷ 4 = 3	24 ÷ 8 = 3
12 ÷ 3 = 4	16 ÷ 4 = 4	32 ÷ 8 = 4
15 ÷ 3 = 5	20 ÷ 4 = 5	40 ÷ 8 = 5
18 ÷ 3 = 6	24 ÷ 4 = 6	48 ÷ 8 = 6
21 ÷ 3 = 7	28 ÷ 4 = 7	56 ÷ 8 = 7
24 ÷ 3 = 8	32 ÷ 4 = 8	64 ÷ 8 = 8
27 ÷ 3 = 9	36 ÷ 4 = 9	72 ÷ 8 = 9
30 ÷ 3 = 10	40 ÷ 4 = 10	80 ÷ 8 = 10
33 ÷ 3 = 11	44 ÷ 4 = 11	88 ÷ 8 = 11
36 ÷ 3 = 12	48 ÷ 4 = 12	96 ÷ 8 = 12

T	O
90 ÷ 3 = 30	3 ÷ 3 = 1

You can use place value counters to calculate larger divisions.

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

	2	4
4	9	¹6

Start by looking at how many groups of 4 will fit into the tens digit. There will be 2 tens, which makes 20, so a 2 goes in the tens column. There is a remainder of 1 ten which is added to the ones column. Then you see how many groups of 4 fit into 16 which is 4.

Using Known Facts

Sometimes, you need to use your times table facts to find out missing values.

? × 3 = 21

21 ÷ 3 = 7 so the missing value is 7.

8 = ? ÷ 4

8 x 4 = 32 so the missing value is 32.

Efficient Methods

Because multiplication is commutative (can be completed in any order), you can use this to make calculations easier and complete them more efficiently. For example...

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

4 x 5 = 20.

Then, calculate 20 x 12 = 240