

Key concepts and questions

Why do you need to start multiplying from the ones?

When multiplying numbers by a 1 digit number you must always start from the ones column as you may need to make an exchange.

Formal written method 2-digit x 1-digit
start here

18×6

1) $8 \times 6 = 48$
2) $10 \times 6 = 60$
3) $60 + 4 \text{ tens}$ exchanged = 100

Formal written method 3-digit x 1-digit
start here

148×4

1) $8 \times 4 = 32$
2) $40 \times 4 = 160$
3) $160 + 3 \text{ tens}$ exchanged = 190
4) $100 \times 4 = 400$
5) $400 + 1 \text{ hundred}$ exchanged = 500

What is a remainder?

In division, the whole may not always share into equal groups. The amount left over is called the remainder.

$27 \div 8 = 3 \text{ remainder } 3$

Making connections

Multiplication facts

Make use of known multiplication and division facts as an efficient method.

e.g. $8 \div 2 = 4$

$80 \div 2 = 40$

$800 \div 2 = 400$

Addition and subtraction

Multiplication is repeated addition.

$6 \times 4 = 24$

Division is repeated subtraction.

$30 \div 6 = 5$

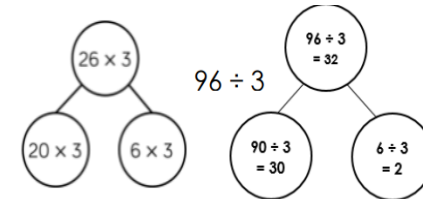
Key Vocabulary

Hundreds	tens	ones	zero
place value	multiply	divide	times tables
whole	The total	commutative	Multiplication can be done either way e.g. $6 \times 4 = 24$ and $4 \times 6 = 24$
partition	Split into parts.		
remainder	The part left over.	factor pairs	2 numbers which multiply to equal a whole. E.g. 3 and 6 are factors of 18.
group	Place items into equal groups.		
share	Split a whole into equal groups.	array	Place objects into rows and columns.

Representations

Part whole models

This will help with separating the whole into parts to multiply and divide.



Bar Model

A bar model helps to represent multiplication and division questions.

Formal multiplication

Place value charts and counters help with exchanging.