

'I WILL SHINE'

# Addition, subtraction, multiplication and division

## Prior learning

Let's activate my long-term memory!  
In Y5, I learnt to...

- add and subtract numbers with more than 4 digits using formal written methods and mentally with increasingly large numbers
- use rounding to check answers
- identify multiples and factors
- establish whether a number up to 100 is prime
- multiply numbers up to four-digits by a one or two-digit number
- divide numbers up to 4 digits by a one-digit number
- recognise and use square and cube numbers
- solve multi step problems

## Key vocabulary

What words will I use in this unit?  
Do I recognise any already?  
multiply divide remainders

common factors common multiples

prime BODMAS inverse estimate

## Tools and drawings

Which tools and drawing might I use to support my learning?

PV charts

PV counters

## Current learning

In this unit, I will learn how to...

- Add and subtract integers
- Multiply 4-digits by 2 digits
- Divide using short division
- Divide using factors
- Divide using long division
- Identify factors
- Identify common factors
- Identify common multiples
- Identify primes to 100
- Understand squares and cubes
- Understand order of operations
- Calculate and estimate mentally
- Reason from known facts

## Knowledge Pitstop

<b>B</b>	<b>Brackets</b>	$10 \times (4 + 2) = 10 \times 6 = 60$
<b>O</b>	<b>Order</b>	$5 + 2^2 = 5 + 4 = 9$
<b>D</b>	<b>Division</b>	$10 + 6 \div 2 = 10 + 3 = 13$
<b>M</b>	<b>Multiplication</b>	$10 - 4 \times 2 = 10 - 8 = 2$
<b>A</b>	<b>Addition</b>	$10 \times 4 + 7 = 40 + 7 = 47$
<b>S</b>	<b>Subtraction</b>	$10 \div 2 - 3 = 5 - 3 = 2$

## Squares and Cubes

Square numbers result from a number being multiplied by itself (e.g.  $5 \times 5 = 25$ ):

1, 4, 9, 16, 25, 36, 49, 64, 81, 100

Cube numbers result from a number being multiplied by itself twice ( $2 \times 2 \times 2 = 8$ ):

1, 8, 27, 64, 125

## Common Factors

Factors of 48

1 2 3 4 6 8 12 16 24 48

Factors of 30

1 2 3 5 6 10 15 30

Common factors: 1, 2, 3, 6

## Common Multiples

Multiples of 3

3 ... 18 21 24 ... 39 42

Multiples of 7

7 14 21 28 35 42

Common multiples: 21, 42...

## Primes

A prime number has only 1 and itself as factors: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43

A composite number has factors other than 1 and itself.