

Mathematics: Year 1 Addition and Subtraction



Previously, I have learnt...

- To recall number bonds to 5 and some number bonds to 10, including double facts
- To compare quantities up to 10, recognising when one quantity is greater than, less than or the same as the other quantity

10 = 1+9 2+8 3+7 4+6

5+5 6+4 7+3 8+2 9+1

Number bonds

- To represent and use number bonds and related subtraction facts within 20

Mental calculation

- To add and subtract one-digit and two-digit numbers to 20, including zero

Written methods

- To read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs

Identifying, representing and estimating numbers

- To identify and represent numbers using objects and pictorial representations including the number line

Problem solving

- To solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = _ - 9$

Number bonds

- To recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100

Mental calculation

- To add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
 - a two-digit number and ones
 - a two-digit number and tens
 - two two-digit numbers
 - adding three one-digit numbers
- To show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot

Written methods

- To read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs

Inverse operations, estimating and checking answers

- To identify, represent and estimate numbers using objects and pictorial representations including the number line

Problem solving

- To solve problems with addition and subtraction:
 - using concrete objects and pictorial representations, including those involving numbers, quantities and measures
 - applying their increasing knowledge of mental and written methods

In other subjects

Science - understanding data
DT - taking measurements
PE - keeping score, measuring, angles
Geography - coordinates, maps
Computing - databases, coding

Life Skills

Shopping and budgeting
Critical thinking
Playing sport
Map reading
Interpreting statistics
Working with computers

Jobs

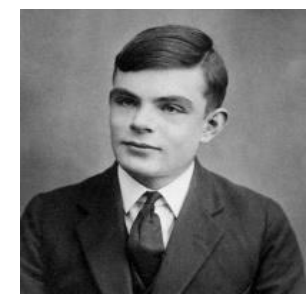
Shop worker
Bank cashier
Architect
Doctor
Nurse
Teacher
Computer programmer and many more!

Vocabulary

equals, is the same as
difference between
near double
halve

How many more to make...?
How many more is... than...?
How much more is...?

How many fewer is...?
How much less is...?
number bonds
fact families
one more, ten more
addend
sum



Alan Turing

Mathematics: Year 2 Addition and Subtraction

Previously, I have learnt...

- Number bonds**
 - To represent and use number bonds and related subtraction facts within 20
- Mental calculation**
 - To add and subtract one-digit and two-digit numbers to 20, including zero
- Written methods**
 - To read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs
- Identifying, representing and estimating numbers**
 - To identify and represent numbers using objects and pictorial representations including the number line
- Problem solving**
 - To solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = _ - 9$

In Year 2, I am learning...

- Number bonds**
 - To recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- Mental calculation**
 - To add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
 - a two-digit number and ones
 - a two-digit number and tens
 - two two-digit numbers
 - adding three one-digit numbers
 - To show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
- Written methods**
 - To read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs
- Inverse operations, estimating and checking answers**
 - To identify, represent and estimate numbers using objects and pictorial representations including the number line
- Problem solving**
 - To solve problems with addition and subtraction:
 - using concrete objects and pictorial representations, including those involving numbers, quantities and measures
 - applying their increasing knowledge of mental and written methods

In Year 3, I will learn...

- Mental calculation**
 - To add and subtract numbers mentally, including:
 - a three-digit number and ones
 - a three-digit number and tens
 - a three-digit number and hundreds
- Written methods**
 - To add and subtract numbers with up to three digits, using formal written methods of column addition and subtraction
- Inverse operations, estimating and checking answers**
 - To estimate the answer to a calculation and use inverse operations to check answers
- Problem solving**
 - To solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction

My future...

- In other subjects**
 - Science - understanding data
 - DT - taking measurements
 - PE - keeping score, measuring, angles
 - Geography - coordinates, maps
 - Computing - databases, coding
- Life Skills**
 - Shopping and budgeting
 - Critical thinking
 - Playing sport
 - Map reading
 - Interpreting statistics
 - Working with computers
- Jobs**
 - Shop worker
 - Bank cashier
 - Architect
 - Doctor
 - Nurse
 - Teacher
 - Computer programmer and many more!

$6 + 3 = 9 = 3 + 6$

Addition is commutative - addition of two numbers can be done in any order.

Vocabulary		
equals, is the same as	How much more is...?	sum
difference between	How many fewer is...?	total
near double	How much less is...?	number facts
halve	number bonds	one hundred more
How many more to make...?	fact families	one hundred less
How many more is... than...?	one more, ten more	tens boundary



Ada Lovelace

Mathematics: Year 3 Addition and Subtraction

Previously, I have learnt...

Number bonds

- To recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100

Mental calculation

- To add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
 - a two-digit number and ones
 - a two-digit number and tens
 - two two-digit numbers
 - adding three one-digit numbers
- To show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot

Written methods

- To read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs

Inverse operations, estimating and checking answers

- To identify, represent and estimate numbers using objects and pictorial representations including the number line

Problem solving

- To solve problems with addition and subtraction:
 - using concrete objects and pictorial representations, including those involving numbers, quantities and measures
 - applying their increasing knowledge of mental and written methods

In Year 3, I am learning...

Mental calculation

- To add and subtract numbers mentally, including:
 - a three-digit number and ones
 - a three-digit number and tens
 - a three-digit number and hundreds

Written methods

- To add and subtract numbers with up to three digits, using formal written methods of column addition and subtraction

Inverse operations, estimating and checking answers

- To estimate the answer to a calculation and use inverse operations to check answers

Problem solving

- To solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction

In Year 4, I will learn...

Mental calculation

- To add and subtract numbers mentally, including:
 - a three-digit number and ones
 - a three-digit number and tens
 - a three-digit number and hundreds

Written methods

- To add and subtract numbers with up to 4 digits using the formal written methods of column addition and subtraction where appropriate

Inverse operations, estimating and checking answers

- To estimate and use inverse operations to check answers to a calculation

Problem solving

- To solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why

My future...

In other subjects

Science - understanding data
DT - taking measurements
PE - keeping score, measuring, angles
Geography - coordinates, maps
Computing - databases, coding

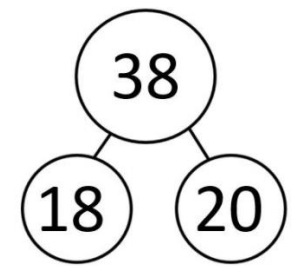
Life Skills

Shopping and budgeting
Critical thinking
Playing sport
Map reading
Interpreting statistics
Working with computers

Jobs

Shop worker
Bank cashier
Architect
Doctor
Nurse
Teacher
Computer programmer
and many more!

Vocabulary			
equals, is the same as	How much more is...?	sum	column addition
difference between	How many fewer is...?	total	column subtraction
near double	How much less is...?	number facts	hundreds boundary
halve	number bonds	one hundred more	exchange
How many more to make...?	fact families	one hundred less	regroup
How many more is... than...?	one more, ten more	tens boundary	

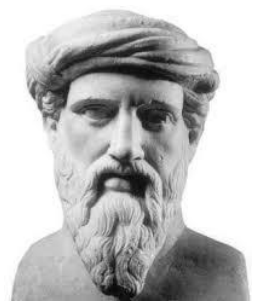


$$18 + 20 = 38$$

$$20 + 18 = 38$$

$$38 - 18 = 20$$

$$38 - 20 = 18$$



Pythagoras

Mathematics: Year 4 Addition and Subtraction

Previously, I have learnt...

Mental calculation

- To add and subtract numbers mentally, including:
 - a three-digit number and ones
 - a three-digit number and tens
 - a three-digit number and hundreds

Written methods

- To add and subtract numbers with up to three digits, using formal written methods of column addition and subtraction

Inverse operations, estimating and checking answers

- To estimate the answer to a calculation and use inverse operations to check answers

Problem solving

- To solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction

In Year 4, I am learning...

Mental calculation

- To add and subtract numbers mentally, including:
 - a three-digit number and ones
 - a three-digit number and tens
 - a three-digit number and hundreds

Written methods

- To add and subtract numbers with up to 4 digits using the formal written methods of column addition and subtraction where appropriate

Inverse operations, estimating and checking answers

- To estimate and use inverse operations to check answers to a calculation

Problem solving

- To solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why

In Year 5, I will learn...

Mental calculation

- To add and subtract numbers mentally, with increasingly large numbers

Written methods

- To add and subtract whole numbers with more than 4 digits, including using formal written methods (column addition and subtraction)

Inverse operations, estimating and checking answers

- To use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy

Problem solving

- To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why

My future...

In other subjects

Science - understanding data
DT - taking measurements
PE - keeping score, measuring, angles
Geography - coordinates, maps
Computing - databases, coding

Life Skills

Shopping and budgeting
Critical thinking
Playing sport
Map reading
Interpreting statistics
Working with computers

Jobs

Shop worker
Bank cashier
Architect
Doctor
Nurse
Teacher
Computer programmer
and many more!

Vocabulary

equals, is the same as	How much more is...?	sum	column addition
difference between	How many fewer is...?	total	column subtraction
near double	How much less is...?	number facts	hundreds boundary
halve	number bonds	one hundred more	exchange
How many more to make...?	fact families	one hundred less	regroup
How many more is... than...?	one more, ten more	tens boundary	inverse



Rene Descartes

Mathematics: Year 5 Addition and Subtraction

In Year 4, I learnt...

Mental calculation

- To add and subtract numbers mentally, including:
 - a three-digit number and ones
 - a three-digit number and tens
 - a three-digit number and hundreds

Written methods

- To add and subtract numbers with up to 4 digits using the formal written methods of column addition and subtraction where appropriate

Inverse operations, estimating and checking answers

- To estimate and use inverse operations to check answers to a calculation

Problem solving

- To solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why

In Year 5, I am learning...

Mental calculation

- To add and subtract numbers mentally with increasingly large numbers

Written methods

- To add and subtract whole numbers with more than 4 digits, including using formal written methods (column addition and subtraction)

Inverse operations, estimating and checking answers

- To use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy

Problem solving

- To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why

In Year 6, I will learn...

Mental calculation

- To perform mental calculations, including with mixed operations and large numbers
- To use their knowledge of the order of operations to carry out calculations involving the four operations

Written methods

- To add and subtract whole numbers with more than 4 digits, including using formal written methods (column addition and subtraction)

Inverse operations, estimating and checking answers

- To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.

Problem solving

- To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why

My future...

In other subjects

Science - understanding data
DT - taking measurements
PE - keeping score, measuring, angles
Geography - coordinates, maps
Computing - databases, coding

Life Skills

Shopping and budgeting
Critical thinking
Playing sport
Map reading
Interpreting statistics
Working with computers

Jobs

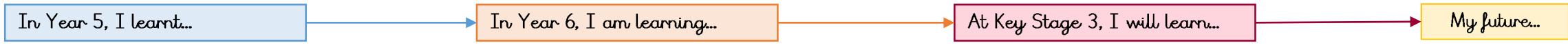
Shop worker
Bank cashier
Architect
Doctor
Nurse
Teacher
Computer programmer
and many more!

Vocabulary			
equals, is the same as	How many fewer is...?	number facts	exchange
difference between	How much less is...?	one hundred more	regroup
near double	number bonds	one hundred less	inverse
halve	fact families	tens boundary	efficient written method
How many more to make...?	one more, ten more	column addition	ones boundary
How many more is... than...?	sum	column subtraction	tenths boundary
How much more is...?	total	hundreds boundary	



Katherine Johnson

Mathematics: Year 6 Addition and Subtraction



Mental calculation

- To add and subtract numbers mentally with increasingly large numbers

Written methods

- To add and subtract whole numbers with more than 4 digits, including using formal written methods (column addition and subtraction)

Inverse operations, estimating and checking answers

- To use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy

Problem solving

- To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why

Mental calculation

- To perform mental calculations, including with mixed operations and large numbers
- To use their knowledge of the order of operations to carry out calculations involving the four operations

Written methods

- To add and subtract whole numbers with more than 4 digits, including using formal written methods (column addition and subtraction)

Inverse operations, estimating and checking answers

- To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy

Problem solving

- To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why

- To apply the four operations, including formal written methods, to decimals, proper and improper fractions, and mixed numbers, all both positive and negative
- To use conventional notation for the priority of operations, including brackets, powers, roots and reciprocals
- To recognise and use relationships between operations including inverse operations
- To use a calculator and other technologies to calculate results accurately and then interpret them appropriately

In other subjects

Science – understanding data
DT – taking measurements
PE – keeping score, measuring, angles
Geography – coordinates, maps
Computing – databases, coding

Life Skills

Shopping and budgeting
Critical thinking
Playing sport
Map reading
Interpreting statistics
Working with computers

Jobs

Shop worker
Bank cashier
Architect
Doctor
Nurse
Teacher
Computer programmer
and many more!

Vocabulary			
equals, is the same as	How many fewer is...?	number facts	exchange
difference between	How much less is...?	one hundred more	regroup
near double	number bonds	one hundred less	inverse
halve	fact families	tens boundary	efficient written method
How many more to make...?	one more, ten more	column addition	ones boundary
How many more is... than...?	sum	column subtraction	tenths boundary
How much more is...?	total	hundreds boundary	order of operations



Muhammad ibn Musa al-Khwarizmi