

Mathematics: Year 1 Fractions

Previously, I have learnt...

- To represent patterns within numbers up to 10, including evens and odds, and double facts
- To represent how quantities can be distributed equally

A half is 1 of 2 equal size pieces.

In Year 1, I am learning...

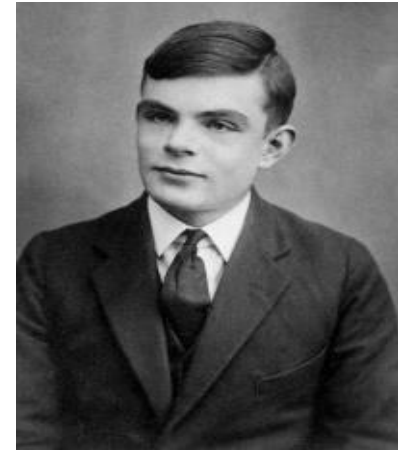
- ### Recognising fractions
- To recognise, find and name a half as one of two equal parts of an object, shape or quantity
 - To recognise, find and name a quarter as one of four equal parts of an object, shape or quantity

$\frac{1}{4}$

$\frac{1}{4}$ of 12 = 3

In Year 2, I will learn...

- ### Counting
- To count in halves up to 10
- ### Recognising fractions
- To recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity
- ### Equivalence
- To write simple fractions ($\frac{1}{2}$ of 6 = 3) and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$



Alan Turing

My future...

In other subjects

Science - understanding data
DT - taking measurements, understanding shape
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!

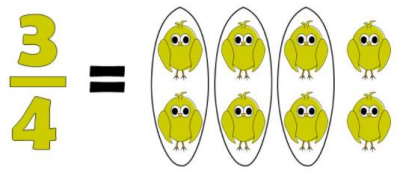
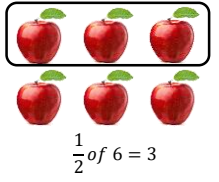
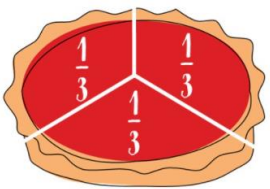
Vocabulary

whole	one half
equal parts	two halves
parts of a whole	a quarter
equal grouping	two quarters
equal sharing	

In Year 1, I learnt...

Recognising fractions

- To recognise, find and name a half as one of two equal parts of an object, shape or quantity
- To recognise, find and name a quarter as one of four equal parts of an object, shape or quantity



In Year 2, I am learning...

Counting

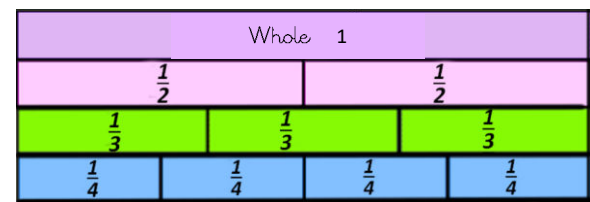
- To count in halves up to 10

Recognising fractions

- To recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity

Equivalence

- To write simple fractions ($\frac{1}{2}$ of 6 = 3) and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$



In Year 3, I will learn...

Counting

- To count up and down in tenths

Recognising fractions

- To recognise find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators
- To recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
- To recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators

Comparing fractions

- To compare and order unit fractions
- To compare and order fractions with the same denominator

Equivalence

- To recognise and show, using diagrams, equivalent fractions with small denominators

Addition and subtraction

- To add and subtract fractions with the same denominator within one whole

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Vocabulary

whole	one half	one of three equal parts
equal parts	two halves	parts
parts of a whole	a quarter	equivalence
equal grouping	two quarters	equivalent
equal sharing	three quarters	numerator
	one third, a third	denominator
	two thirds	



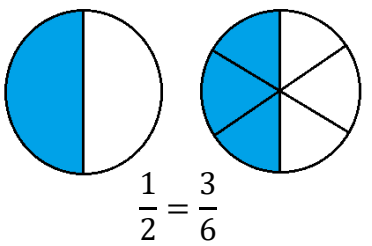
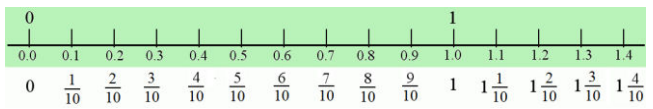
Ada Lovelace

In Year 2, I learnt...

Counting
• To count in halves up to 10

Recognising fractions
• To recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity

Equivalence
• To write simple fractions ($\frac{1}{2}$ of 6 = 3) and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$



In Year 3, I am learning...

Counting
• To count up and down in tenths

Recognising fractions
• To recognise find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators
• To recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
• To recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators

Comparing fractions
• To compare and order unit fractions
• To compare and order fractions with the same denominator

Equivalence
• To recognise and show, using diagrams, equivalent fractions with small denominators

Addition and subtraction
• To add and subtract fractions with the same denominator within one whole

In Year 4, I will learn...

Counting
• To count up and down in hundredths

Recognising fractions
• To recognise that hundredths arise by dividing an object by one hundred and dividing tenths by ten

Comparing decimals
• To compare numbers with the same number of decimal places up to two decimal places

Rounding decimals
• To round decimals with one decimal place to the nearest whole number

Equivalence
• To recognise and show, using diagrams, families of common equivalent fractions
• To recognize and write decimal equivalents of any number of tenths or hundredths
• To recognize and write decimal equivalents to $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{3}{4}$

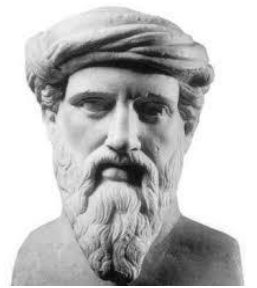
Addition and subtraction
• To add and subtract fractions with the same denominator

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Pythagoras

Vocabulary

whole	one half	one of three equal parts	unit fraction
equal parts	two halves	equivalence	non-unit fraction
parts of a whole	a quarter	equivalent	compare
equal grouping	two quarters	numerator	order
equal sharing	three quarters	denominator	tenths
	one third, a third		sixths, sevenths,
	two thirds		eighths

In Year 3, I learnt...

Counting

- To count up and down in tenths

Recognising fractions

- To recognise find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators
- To recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
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- To add and subtract fractions with the same denominator within one whole

In Year 4, I am learning...

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Recognising fractions

- To recognise that hundredths arise by dividing an object by one hundred and dividing tenths by ten

Comparing decimals

- To compare numbers with the same number of decimal places up to two decimal places

Rounding decimals

- To round decimals with one decimal place to the nearest whole number

Equivalence

- To recognise and show, using diagrams, families of common equivalent fractions
- To recognize and write decimal equivalents of any number of tenths or hundredths
- To recognize and write decimal equivalents to $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{3}{4}$

Addition and subtraction

- To add and subtract fractions with the same denominator

In Year 5, I will learn...

Comparing fractions

- To compare and order fractions whose denominators are all multiples of the same number

Comparing decimals

- To read, write, order and compare numbers with up to three decimal places

Rounding decimals

- To round decimals with two decimal places to the nearest whole number and to one decimal place

Equivalence

- To identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths
- To read and write decimal numbers as fractions ($0.71 = \frac{71}{100}$)
- To recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
- To recognise the percent symbol (%) and understand that percent relates to "number of parts per hundred"
- To write percentages as a fraction with denominator 100 and as a decimal fraction

Addition and subtraction

- To add and subtract fractions with the same denominator and when the denominators are multiples of the same number
- To recognize mixed numbers and improper fractions and convert from one form to the other and write mathematical statements $> | (\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5})$

Multiplication and division

- To multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams

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a quarter
two quarters
three quarters
one third, a third
two thirds
one of three equal parts
equivalence
equivalent

numerator
denominator
unit fraction
non-unit fraction
compare and order
tenths
sixths, sevenths, eighths

equivalent decimals and fractions
hundredths
decimal, decimal point,
decimal place
proportion



Rene Descartes

In Year 4, I learnt...

Counting

- To count up and down in hundredths

Recognising fractions

- To recognise that hundredths arise by dividing an object by one hundred and dividing tenths by ten

Comparing decimals

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Addition and subtraction

- To add and subtract fractions with the same denominator

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Comparing decimals

- To read, write, order and compare numbers with up to three decimal places

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- To round decimals with two decimal places to the nearest whole number and to one decimal place

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- To add and subtract fractions with the same denominator and when the denominators are multiples of the same number
- To recognize mixed numbers and improper fractions and convert from one form to the other and write mathematical statements $> | \frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$

Multiplication and division

- To multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams

In Year 6, I will learn...

Comparing fractions

- To compare and order fractions, including fractions > 1

Comparing decimals

- To identify the value of each digit in numbers given to three decimal places

Rounding decimals

- To solve problems which require answers to be rounded to specified degrees of accuracy

Equivalence

- To use common factors to simplify fractions
- To use common multiples to express fractions in the same denomination
- To associate a fraction with division and calculate decimal fraction equivalents for a simple fraction ($\frac{3}{8} = 0.375$)
- To recall and use equivalences between simple fractions, decimals and percentages, including in different contexts

Addition and subtraction

- To add and subtract fractions with different denominators and mixed numbers, using the concepts of equivalent fractions

Multiplication and division

- To multiply simple pairs of proper fractions, writing the answer in its simplest form ($\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$)
- To divide proper fractions by whole numbers ($\frac{1}{3} \div 2 = \frac{1}{6}$)

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one of three equal parts
equivalence, equivalent

numerator
denominator
unit fraction
non-unit fraction
compare and order
tenths
sixths, sevenths, eighths

equivalent decimals and fractions
hundredths
decimal, decimal point, decimal place
proportion

proper fractions
improper fractions
mixed numbers
thousandths
in every, for every
percentage, percent, %



Katherine Johnson



Comparing fractions

- To compare and order fractions whose denominators are all multiples of the same number

Comparing decimals

- To read, write, order and compare numbers with up to three decimal places

Rounding decimals

- To round decimals with two decimal places to the nearest whole number and to one decimal place

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- To identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths
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- To add and subtract fractions with the same denominator and when the denominators are multiples of the same number
- To recognize mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 ($\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$)

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- To multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams

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- To add and subtract fractions with different denominators and mixed numbers, using the concepts of equivalent fractions

Multiplication and division

- To multiply simple pairs of proper fractions, writing the answer in its simplest form ($\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$)
- To divide proper fractions by whole numbers ($\frac{1}{3} \div 2 = \frac{1}{6}$)

- To apply the four operations to decimals, proper and improper fractions, and mixed numbers, all both positive and negative
- To work interchangeably with decimals and their corresponding fractions (such as 3.5 and $\frac{7}{2}$ or 0.375 and $\frac{3}{8}$)
- To interpret percentages and percentage changes as a fraction or a decimal
- To express one quantity as a percentage of another, compare two quantities using percentages and work with percentages greater than 100%
- To interpret fractions and percentages as operators

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whole equal parts parts of a whole equal grouping equal sharing one half two halves	a quarter two quarters three quarters one third, a third two thirds one of three equal parts equivalence, equivalent	numerator denominator unit fraction non-unit fraction compare and order tenths sixths, sevenths, eighths	equivalent decimals and fractions hundredths decimal, decimal point, decimal place proportion	proper fractions improper fractions mixed numbers thousandths in every, for every percentage, percent, %	degree of accuracy simplify reduce to simplest form ratio
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Muhammad ibn Musa al-Khwarizmi