

Year 5 units

[View interactive sequence online](#) 

1

Understand tenths as part of a whole, represent and calculate mentally

2

Compose and calculate with decimals including column addition and subtraction

3

Understand hundredths as parts of a whole and represent

4

Use knowledge of decimals to solve problems in different contexts: length

5

Negative numbers

6

Multiplication by partitioning leading to short multiplication (2 by 1-digit)

7

Multiplication by partitioning leading to short multiplication (3 by 1-digit)

8

Division by partitioning leading to short division (2 and 3-digits by 1-digit)

9

Understand the concept of area

10

Link area of rectangles to multiplication

11

Compare and describe measurements using knowledge of multiplication and division

12

Calculating with decimal fractions

13

Understand the concept of volume

14

Multiply 3 or more numbers (commutative and associative laws)

15

Understand and use the concept of factorisation (square and prime numbers)

16

Use common factors and multiples to solve calculations efficiently

17

Multiply a proper fraction by a whole number

18

Multiply improper fractions and mixed numbers by a whole number

19

Find unit and non-unit fractions of whole numbers exploring parts and wholes

20

Comparing fractions using equivalence and decimals

21

Converting units

22

Angles: compare, name, estimate and measure angles

1. Understand tenths as part of a whole, represent and calculate mentally

Year 5

[Go to unit resources](#) 

Threads

- Number
- Number: Fractions
- Number: Place value
- Statistics

Unit description

In this unit pupils will describe, represent and order tenths as a decimal fraction. They will round a decimal number with tenths to the nearest whole number and calculate mentally with decimal numbers including tenths.

Why this, why now?

This unit introduced the decimal notation for tenths. It builds on pupils' knowledge of fractions and of using place value multiply and divide by 10 and 100. They will also develop their understanding of rounding to include rounding decimals to the nearest whole number. Pupils will then go on to calculate with decimals in column addition and subtraction and to extend their decimal understanding to include hundredths.

Lessons in unit

1. Identify tenths as part of a whole
2. Describe and represent tenths as a decimal number
3. Count tenths in different ways
4. Describe and write decimal numbers with tenths in different ways
5. Compare and order decimal numbers with tenths

Prior knowledge requirements

- Recognise place value in decimals
- Link tenths to fractions and division by 10
- Represent tenths using diagrams or number lines

2. Compose and calculate with decimals including column addition and subtraction

Year 5

[Go to unit resources](#) 

Threads

- Number
- Number: Addition and Subtraction
- Number: Place value
- Statistics

Unit description

In this unit pupils will extend their understanding of formal calculation strategies to use column methods to add and subtract with decimal numbers.

Why this, why now?

In this unit pupils have the opportunity to revisit column representations of addition and subtraction and to extend their understanding and calculate with decimal numbers. Having deepened their understanding of tenths as a decimal, they will go on to understand and represent hundredths as parts of a whole.

Lessons in unit

1. Explain that decimal numbers with tenths can be composed additively
2. Explain that decimal numbers with tenths can be composed multiplicatively
3. Use known facts and mental strategies to calculate with decimal numbers within and across a whole
4. Use knowledge of column addition and subtraction to calculate with decimal numbers
5. Use representations to round a decimal number with tenths to the nearest whole number

Prior knowledge requirements

- Understand tenths and hundredths
- Link fractions to decimal notation
- Use place value in decimal contexts

3. Understand hundredths as parts of a whole and represent

Year 5

[Go to unit resources](#) 

Threads

- Number
- Number: Fractions
- Number: Place value
- Statistics

Unit description

In this unit pupils will identify hundredths as part of a whole and describe and represent hundredths as a decimal fraction. They will compare and order decimal numbers with hundredths.

Why this, why now?

This unit further develops place value understanding to include hundredths represented as decimals. Pupils describe, represent, compare and order decimal numbers with hundredths and partition them in different ways. They will then go on to use decimals including hundredths in the context of length.

Lessons in unit

1. Identify hundredths as part of a whole
2. Describe and represent hundredths as a decimal number
3. Describe and write decimal numbers with hundredths in different ways
4. Compare and order decimal numbers with hundredths
5. Explain that decimal numbers with hundredths can be partitioned in different ways

Prior knowledge requirements

- Recall number facts and sequences
- Use place value understanding
- Apply basic operations in context

4. Use knowledge of decimals to solve problems in different contexts: length

Year 5

[Go to unit resources](#) 

Threads

- Geometry and Measure
- Number: Multiplication and division
- Number: Place value

Unit description

In this unit pupils will use their knowledge of decimal place value to convert between and compare metres and centimetres explaining that different lengths can be composed additively and multiplicatively.

Why this, why now?

This unit gives pupils the opportunity to apply their understanding of decimal place value in the context of measure, converting between metres and centimetres. They will use mental, informal and formal methods to calculate with length and include three decimal places when comparing, ordering and solving problems with length. They will then go on to apply their decimal place value understanding in the context of money.

Lessons in unit

1. Use knowledge of decimal place value to convert between and compare metres and centimetres
2. Explain that different lengths can be composed additively and multiplicatively
3. Use knowledge of decimal place value to solve problems in different contexts
4. Use knowledge of place value to calculate with decimal numbers up to and bridging one tenth
5. Use knowledge of column addition and subtraction to calculate with decimals: tenths and hundredths
6. Round a decimal number with hundredths to the nearest tenth
7. Round a decimal number with hundredths to the nearest whole number
8. Read and write numbers with up to 3 decimal places
9. Compare and order numbers with up to 3 decimal places
10. Solve problems with numbers with up to 3 decimal places

Prior knowledge requirements

- Understand tenths and hundredths as decimals
- Convert between cm and m
- Compare and add lengths with the same or related units

5. Negative numbers

Year 5

[Go to unit resources](#) 

Threads

- Geometry and Measure
- Number
- Number: Place value
- Statistics

Unit description

In this unit pupils will interpret numbers greater than and less than zero. They will read and write negative numbers, explain how the value of a number relates to its position from zero, positioning on a number line.

Why this, why now?

This unit introduces negative numbers in a range of contexts. Pupils will learn to read and write negative numbers, considering their position relative to zero on a number line. They will interpret negative and positive sets of numbers in different contexts including temperature, coordinate grids and graphs. Having explored negative numbers, pupils will later expand their place value understanding to include numbers with up to 8 digits.

Lessons in unit

1. Represent a change story using addition and subtraction symbols
2. Interpret numbers greater than and less than zero in different contexts
3. Read and write negative numbers
4. Explain how the value of a number relates to its position from zero
5. Identify and place negative numbers on a number line
6. Interpret sets of negative and positive numbers in a range of contexts
7. Use knowledge of positive and negative numbers to calculate intervals
8. Explain how negative numbers are used on a coordinate grid
9. Use knowledge of positive and negative numbers to interpret graphs
10. Solve problems involving positive and negative numbers in a range of contexts

Prior knowledge requirements

- Count forwards and backwards through zero
- Understand zero as a position on a number line
- Compare and order positive and negative integers

6. Multiplication by partitioning leading to short multiplication (2 by 1-digit)

Year 5

[Go to unit resources](#) 

Threads

- Number
- Number: Multiplication and division
- Number: Place value

Unit description

In this unit pupils will multiply a 2-digit number by a single-digit number using partitioning and representations using expanded multiplication and using short multiplication.

Why this, why now?

This unit builds on knowledge and understanding of multiplication, including multiplying and dividing by 10 and multiples of 10 to introduce the representation of short multiplication. Pupils apply their understanding of informal strategies based on the distributive law and refine them into short multiplication for 2-digit by 1-digit calculations. This will prepare them for multiplying a 3-digit by a 1-digit number in the next unit.

Lessons in unit

1. Multiply a 2-digit number by a 1-digit number using partitioning and representations (one regroup)
2. Multiply a 2-digit number by a 1-digit number using partitioning and representations (two regroups)
3. Multiply a 2-digit number by a 1-digit number using partitioning
4. Multiply a 2-digit number by a 1-digit number using expanded multiplication (no regroups)
5. Multiply a 2-digit number by a 1-digit number using short multiplication (no regroups)
6. Multiply a 2-digit number by a 1-digit number using expanded multiplication (regrouping 1s to 10s)
7. Multiply a 2-digit number by a 1-digit number using short multiplication (regrouping 1s to 10s)
8. Multiply a 2-digit number by a 1-digit number using expanded multiplication (regrouping 10s to 100s)
9. Multiply a 2-digit number by a 1-digit number using short multiplication (regrouping 10s to 100s)
10. Estimate and multiply a 2-digit by a 1-digit number using expanded and short multiplication

Prior knowledge requirements

- Recall number facts and sequences
- Use place value understanding
- Apply basic operations in context

7. Multiplication by partitioning leading to short multiplication (3 by 1-digit)

Year 5

[Go to unit resources](#) 

Threads

- Number
- Number: Multiplication and division
- Number: Place value

Unit description

In this unit pupils will multiply a 3-digit number by a single-digit number using expanded and short multiplication.

Why this, why now?

This unit develops the understanding of using short multiplication for 2-digit by 1-digit calculations and introduces 3-digit by 1-digit multiplication. Pupils are encouraged to use estimation to support accurate calculation. Having explored short multiplication, pupils will later go on to look at how knowledge of equivalence in multiplicative relationships can support both mental and written methods of calculation.

Lessons in unit

1. Multiply a 3-digit by a 1-digit number using partitioning
2. Multiply a 3-digit by a 1-digit number with no regroupings
3. Multiply a 3-digit by a 1-digit number with one or two regroupings
4. Multiply a 3-digit by a 1-digit number with multiple regroupings
5. Use estimation to support accurate calculation

Prior knowledge requirements

- Recall multiplication facts
- Partition numbers into hundreds, tens, and ones
- Multiply each part and recombine to solve

8. Division by partitioning leading to short division (2 and 3-digits by 1-digit)

Year 5

[Go to unit resources](#) 

Threads

- Number
- Number: Multiplication and division
- Number: Place value

Unit description

In this unit pupils will divide a 2-digit and a 3-digit number by a single-digit number using partitioning and representations and divide a 2-digit number by a single-digit number by using short division.

Why this, why now?

This unit revisits the concept of division and introduces a short division representation to support calculation, drawing on times table and place value knowledge and understanding. Pupils learn how to record regrouping and remainders using the short division representation. This will prepare them for using multiplication and division in the context of measures and for division involving larger numbers in the future.

Lessons in unit

1. Divide a 2-digit by a 1-digit number using partitioning and representations (no remainders)
2. Divide a 2-digit by a 1-digit number using partitioning (with regrouping)
3. Divide a 2-digit by a 1-digit number using representations with exchanging and remainders
4. Divide a 2-digit by a 1-digit number using short division (no regrouping)
5. Divide a 2-digit by a 1-digit number using short division (with regrouping)
6. Divide a 2-digit number using short division (with regrouping and remainders)
7. Divide a 3-digit by a 1-digit number using partitioning and representations (no remainders)
8. Divide a 3-digit number using partitioning and representations (one regroup)
9. Divide using partitioning and representations (multiple regroups and remainder)
10. Divide a 3-digit by a 1-digit number using short division
11. Divide using short division with regrouping and remainders
12. Use short division when the hundreds digit is smaller than the divisor
13. Use efficient division strategies to solve problems
14. Solve problems involving multiplication and division

15. Solve problems involving multiplication and division in a range of contexts

Prior knowledge requirements

- Understand division as sharing or grouping
- Use partitioning strategies
- Recall multiplication and division facts

9. Understand the concept of area

Year 5

[Go to unit resources](#) 

Threads

- Geometry and Measure
- Number: Multiplication and division

Unit description

In this unit pupils will explain what area is and measure using counting as a strategy. They will make different shapes with the same area and compare the area of different shapes.

Why this, why now?

This unit builds on pupils' understanding of 2D shape to understand the concept of area. They will explain what area is and use strategies of counting squares to measure area, compare areas and explore different shapes with the same area. This will prepare them for using multiplication to calculate area.

Lessons in unit

1. Explain what area is
2. Measure area using counting with squares as a strategy
3. Explain how to make different shapes with the same area
4. Explain how to compare the area of different shapes
5. Solve problems involving counting and drawing the areas of different shapes

Prior knowledge requirements

- Count unit squares in simple shapes
- Understand arrays and multiplication
- Recognise and name common 2D shapes

10. Link area of rectangles to multiplication

Year 5

[Go to unit resources](#) 

Threads

- Geometry and Measure
- Number: Multiplication and division

Unit description

In this unit pupils will calculate the area of a rectangle using multiplication and use their knowledge of area to solve problems.

Why this, why now?

This unit develops pupils' understanding of the concept of area and introduces the use of multiplication to calculate the area of shapes formed from rectangles. They explore compound shapes, calculating the length of unmarked sides and using knowledge of multiplication and division to solve problems involving areas and side lengths. This understanding will underpin understanding of volume and be developed to calculate the areas of other shapes in the future.

Lessons in unit

1. Measure the area of flat shapes using square centimetres
2. Measure the area of flat shapes using square metres
3. Explain how to calculate the area of a rectangle using multiplication
4. Calculate the areas of rectangles using multiplication
5. Calculate the area of shapes made from 2 rectangles by decomposing the shape in different ways
6. Calculate the area of compound rectilinear shapes
7. Choose an efficient way to decompose a compound shape to calculate the area
8. Calculate missing dimensions in rectangles and compound rectilinear shapes
9. Calculate the area of shapes made from 2 or more rectangles
10. Use knowledge of area to solve problems in a range of contexts

Prior knowledge requirements

- Identify right angles
- Compare angles using visual tools
- Estimate angle size using known benchmarks

11. Compare and describe measurements using knowledge of multiplication and division

Year 5

[Go to unit resources](#) 

Threads

- Number: Multiplication and division

Unit description

In this unit pupils will learn to compare and describe measurements using multiplication and division, applying their understanding of scaling as a structure of multiplication.

Why this, why now?

This unit uses the scaling understanding of multiplication and division to compare measurements multiplicatively. Pupils use the language of '___ times the size ___' to describe and compare measurements in the contexts of length, mass, capacity, money and time and to solve problems involving comparison and change. This will prepare them for work converting between units using knowledge of place value and scaling in the future.

Lessons in unit

1. Compare and describe lengths using knowledge of multiplication
2. Solve comparison and change problems using multiplication
3. Compare and describe lengths using knowledge of division
4. Solve comparison and change problems using division
5. Solve problems involving comparison and change
6. Compare and describe measurements involving mass and capacity
7. Compare and describe measurements involving time and money
8. Describe changes in measurement using knowledge of multiplication and division
9. Use knowledge of multiplication and division to solve comparison and change problems
10. Solve comparison and change problems in a range of contexts

Prior knowledge requirements

- Understand standard units for length, mass and capacity
- Use times tables to scale or compare quantities
- Apply multiplication/division to convert units

12. Calculating with decimal fractions

Year 5

[Go to unit resources](#) 

Threads

- Number
- Number: Fractions
- Number: Multiplication and division

Unit description

In this unit pupils will explain the effect of multiplying and dividing a number by 10, 100 and 1,000 and use their knowledge of multiplying decimal fractions by whole numbers to solve measures problems.

Why this, why now?

This unit builds on previous units exploring decimal place value and addition and subtraction of decimals. Pupils use place value to multiply and divide decimals by 10, 100 and 1,000. They solve problems in the context of measures, including some conversion between common units. Pupils then extend their use of formal calculation strategies to include decimals. This will be applied in future lessons including more focused work on converting between units.

Lessons in unit

1. Multiplying and dividing a number by 10, 100 and 1,000
2. Multiplying and dividing a number by 10, 100 and 1,000 including bridging 1
3. Explain how to multiply and divide a number by 10, 100 and 1,000
4. Converting units of length
5. Converting units of mass and capacity
6. Multiply tenths by whole numbers
7. Multiply hundredths by whole numbers
8. Solve measures problems using knowledge of multiplying decimal fractions
9. The relationship between multiplying by 0.1 and dividing by 10
10. The relationship between multiplying by 0.01 and dividing by 100
11. Multiply 1-digit numbers by decimals
12. Multiply 1-digit numbers by decimal fractions using written methods
13. Predicting the size of a product
14. Divide decimal fractions by 1-digit numbers
15. Divide decimal fractions by 1-digit numbers using written methods

Prior knowledge requirements

- Identify equal parts of a whole
- Name common fractions ($\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$)
- Use visual models for fractions

13. Understand the concept of volume

Year 5

[Go to unit resources](#) 

Threads

- Geometry and Measure
- Number: Multiplication and division

Unit description

In this unit pupils will explain what volume is using a range of contexts and describe the units used to measure volume. They will explain how to calculate the volume of a cuboid.

Why this, why now?

After a break from the introduction of the concept of area, pupils now look at the concept of volume and 3D rectilinear shapes. They explore the concept of volume in a range of contexts, consider the units used to measure volume and then use multiplication to calculate the volume of cubes, cuboids and compound shapes made from cubes and cuboids. This learning leads into work on multiplying 3 or more numbers, drawing on understanding of the commutative and associative laws.

Lessons in unit

1. Explain what volume is in a range of contexts
2. Describe the units used to measure volume
3. Explain how to calculate the volume of a cuboid and a cube
4. Explain how to calculate the volume of compound shapes
5. Use knowledge of calculating volume to solve problems in a range of contexts

Prior knowledge requirements

- Recognise and count cubes in a 3D structure
- Understand the concept of space and capacity
- Measure using non-standard or standard cubic units

14. Multiply 3 or more numbers (commutative and associative laws)

Year 5

[Go to unit resources](#) 

Threads

- Geometry and Measure
- Number
- Number: Multiplication and division

Unit description

In this unit pupils will explain the use of the commutative and associative laws to rearrange and simplify calculations when multiplying three or more numbers.

Why this, why now?

In this unit, pupils learn how the commutative and associative laws allow for calculations to be rearranged and factors multiplied in different orders and combinations to give the same product. They use this to simplify calculations and apply it in the context of calculating volume and to solve problems in a range of contexts. This learning will be developed with factorization also introduced as a strategy for solving multiplication calculations.

Lessons in unit

1. Explain the use of the commutative and associative laws when multiplying three or more numbers
2. Apply commutative and associative laws to simplify multiplications
3. Explain the reasons for changing two-factor multiplication calculations to three-factor calculations
4. Apply the commutative and associative laws to simplify volume calculations
5. Apply the commutative and associative laws to simplify problems in a range of contexts

Prior knowledge requirements

- Recall basic multiplication facts
- Understand and use commutative property of multiplication
- Group numbers to simplify multiplication (associative property)

15. Understand and use the concept of factorisation (square and prime numbers)

Year 5

[Go to unit resources](#) 

Threads

- Number
- Number: Multiplication and division

Unit description

In this unit pupils will understand and use the concept of factorisation, explaining what a factor is and how to use arrays and multiplication/division facts to find them. They will identify prime numbers, square numbers and composite numbers.

Why this, why now?

Pupils have used the word factor in describing multiplication equations and in this unit they deepen their understanding and use the word to describe factors and explore factorization of numbers. They will link this to their understanding of arrays and also explore the special cases of square and prime numbers and how this relates to their factors. This knowledge and understanding of factors will be applied when they use factorization to solve calculations efficiently.

Lessons in unit

1. Explain what a factor is and use arrays and multiplication and division facts to find them
2. Explain how to find all the factors of a number systematically
3. Use a complete list of factors to explain when a number is a square number
4. Explain how to identify a prime number or a composite number
5. Explain how to identify a prime factor of a number

Prior knowledge requirements

- Know multiplication facts to 12x12
- Identify square numbers
- Recognise and list factors of a number

16. Use common factors and multiples to solve calculations efficiently

Year 5

[Go to unit resources](#) 

Threads

- Number
- Number: Multiplication and division

Unit description

In this unit pupils will explain how to identify common factors and multiples and use this knowledge of properties of number along with knowledge of the commutative and associative laws to solve problems in a range of contexts.

Why this, why now?

Pupils in this unit apply their understanding of factors and multiples to find common factors and multiples of two or more numbers. They use their knowledge of properties of numbers to solve problems including using factor pairs of numbers, including 100, along with understanding of the commutative and associative laws to simplify calculations and work efficiently. This work will be developed in the future when pupils look at using equivalence to calculate.

Lessons in unit

1. Explain how to identify common factors between two or more numbers
2. Explain how to identify a common multiple of two or more numbers
3. Use knowledge of properties of number to solve problems
4. Explain how to use the factor pairs of 100 to solve calculations efficiently
5. Use properties of numbers and the commutative and associative laws to simplify calculations

Prior knowledge requirements

- Understand the meaning of factor and multiple
- Identify factor pairs of whole numbers
- Recall multiplication facts and use times table fluency

17. Multiply a proper fraction by a whole number

Year 5

[Go to unit resources](#) 

Threads

- Number
- Number: Fractions

Unit description

In this unit pupils will explain the relationship between repeated addition of a proper fraction and multiplication of fractions with both unit and not-unit fractions. They will multiply a proper fraction by a whole number.

Why this, why now?

This unit builds both on prior learning where pupils calculated the value of a part of a set using unit fractions as operators and on more recent learning calculating with mixed numbers. In this unit, pupils relate repeated addition of unit fractions to multiplication of fractions before multiplying proper fractions by whole numbers both within and greater than a whole. This will prepare them for multiplying improper fractions and mixed numbers by a whole number.

Lessons in unit

1. Explain the relationship between repeated addition of unit fractions and multiplication of fractions
2. Explain the relationship between repeated addition of fractions and multiplication of fractions
3. Multiply a proper fraction by a whole number where the product is within a whole
4. Multiply a proper fraction by a whole number where the product is greater than a whole
5. Solve problems involving multiplying proper fractions by whole numbers

Prior knowledge requirements

- Recognise and represent proper fractions
- Understand multiplication as repeated addition
- Use visual models to show groups of fractions

18. Multiply improper fractions and mixed numbers by a whole number

Year 5

[Go to unit resources](#) 

Threads

- Number
- Number: Fractions

Unit description

In this unit pupils will multiply an improper fraction and a mixed number by a whole number.

Why this, why now?

Pupils extend their understanding of multiplying fractions by whole numbers to multiplying improper fractions and mixed numbers both within and bridging a whole. This will be developed further when they find unit and non-unit fractions of whole numbers by exploring parts and wholes.

Lessons in unit

1. Represent and multiply an improper fraction by a whole number.
2. Multiply a mixed number by a whole number not bridging a whole
3. Multiply a mixed number by a whole number bridging a whole
4. Solve problems involving multiplication of mixed numbers by a whole number
5. Solve problems involving fractions and mixed numbers

Prior knowledge requirements

- Identify equal parts of a whole
- Name common fractions ($\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$)
- Use visual models for fractions

19. Find unit and non-unit fractions of whole numbers

exploring parts and wholes

Year 5

[Go to unit resources](#) 

Threads

- Number
- Number: Fractions

Unit description

In this unit pupils will find unit and non-unit fractions of whole numbers and explore parts and wholes.

Why this, why now?

In this unit, pupils link multiplying fractions by whole numbers with finding a fraction of a quantity. They explore this using representations and explain this link focusing on the use of the word 'of' to represent multiplication. Pupils use mental and written strategies to calculate non-unit fractions of quantities and consider how to calculate the whole when a part, either a unit or non-unit fraction is known.

Lessons in unit

1. Find a unit fraction of a quantity using representations
2. Explain how finding a fraction of a quantity relates to multiplying by a unit fraction
3. Explain how dividing by a whole number relates to multiplying by a unit fraction
4. Use knowledge of multiplying a whole number by a unit fraction to solve problems
5. Find a non-unit fraction of a quantity using mental and written calculation strategies
6. Multiply a whole number by a proper fraction
7. Explain when a calculation represents scaling down and when it represents repeated addition
8. Find the whole when the size of a unit fraction is known
9. Find a unit fraction when the size of a non-unit fraction is known
10. Find the whole when the size of a non-unit fraction is known

Prior knowledge requirements

- Recognise a whole as composed of parts
- Use part-part-whole models
- Apply knowledge of fractions or numbers in context

20. Comparing fractions using equivalence and decimals

Year 5

[Go to unit resources](#) 

Threads

- Number
- Number: Fractions
- Number: Multiplication and division

Unit description

In this unit pupils will use representations to describe and compare two fractions. They will explain the relationship within families of equivalent fractions and use their knowledge of common equivalents to compare fractions with decimals.

Why this, why now?

In this unit, pupils use contexts and representations to explore equivalence between fractions. They position equivalent fractions in the same position on a number line and explain equivalence using the relationship between the numerators and denominators within and across equivalent fractions. Using tenths and hundredths, pupils also look at decimal equivalence and use this knowledge to compare and order fractions and decimals. This unit prepares pupils to add and subtract fractions in future units.

Lessons in unit

1. Use representations to describe and compare two fractions
2. Use representations to describe and compare fractions
3. Use representations to describe and compare two fractions in a continuous context
4. Use the language of equivalent fractions correctly
5. Explain the relationship between numerators and denominators in equivalent fractions
6. Use the relationship between the numerator and denominator in equivalent fractions to solve problems
7. Explain the relationship between numerators and denominators across equivalent fractions
8. Explain the relationship within families of equivalent fractions
9. Use the relationship between the numerator and denominator to simplify fractions
10. Use understanding of equivalent fractions to solve problems
11. Explain and represent how to divide 1 into different numbers of equal parts
12. Identify and describe patterns in the number system
13. Use knowledge of common equivalents to compare fractions and decimals
14. Recall common fraction-decimal equivalents
15. Solve problems using fraction-decimal equivalents

Prior knowledge requirements

- Identify equal parts of a whole
- Name common fractions ($\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$)
- Use visual models for fractions

21. Converting units

Year 5

[Go to unit resources](#) 

Threads

- Geometry and Measure
- Number: Multiplication and division
- Number: Place value

Unit description

In this unit pupils will apply memorised unit conversions to convert between units of measure and solve problems involving converting between units of time and money.

Why this, why now?

This unit builds on knowledge of equivalence between units of measure and applies this to solve problems in the contexts of measures, time and money. Pupils look at metric and imperial equivalence and use a line graph to convert between pounds and Euro. They also apply their knowledge and understanding of multiplying and dividing by 10, 100 and 1,000 which will prepare them for handling numbers with up to 8 digits in the future.

Lessons in unit

1. Convert from larger to smaller units of measure
2. Convert from smaller to larger units of measure
3. Convert to and from fraction and decimal quantities of larger units
4. Use known facts to derive common conversions over 1
5. Use known facts to carry out conversions that correspond to 10 and 100 parts
6. Solve problems involving different units of measure
7. Understand approximate equivalence between metric and imperial units
8. Convert between miles and kilometres and pounds and Euro
9. Solve problems involving converting between units of time
10. Solve problems involving converting units in different contexts

Prior knowledge requirements

- Know common metric conversions
- Multiply and divide by powers of 10
- Apply conversion in context

22. Angles: compare, name, estimate and measure angles

Year 5

[Go to unit resources](#) 

Threads

- Geometry and Measure

Unit description

In this unit pupils will compare the size of angles where there is a clear visual difference and use the terms acute, obtuse and reflex when describing the size of angles or amount of rotation with relation to right angles using a unit called degrees.

Why this, why now?

This unit builds on and formalizes knowledge of angles as a measure of turn and as properties of 2D shapes. Pupils classify and define acute, obtuse and reflex angles, identifying them in shapes and using them to classify shapes. They calculate missing angles, using knowledge that there are 360 degrees in a full turn and also use an angle measurer or protractor to measure and construct angles. This will be built on as they learn to draw construct shapes in the future.

Lessons in unit

1. Review understanding and identification of right angles
2. Review understanding of angles as a measure of turn
3. Use the terms acute, obtuse and reflex when comparing angles to a right angle
4. Use the unit of degrees as a standard unit to measure angles
5. Describe static angles using the standard unit of degrees when compared to a right angle
6. Describe rotations using the standard unit of degrees when compared to a right angle
7. Estimate acute and obtuse angles using the standard unit of degrees
8. Know that the angles in a full turn sum to 360 degrees and use this to solve problems
9. Know that the angles at a point sum to 360 degrees and use this to solve problems
10. Angles in quadrilaterals
11. Know that the angles on a straight line sum to 180 degrees and use this to solve problems
12. Angles in triangles
13. Measure the size of angles accurately using a protractor
14. Draw angles accurately using a protractor
15. Reasoning about angles in polygons

Prior knowledge requirements

- Identify right angles
- Compare angles using visual tools

- Estimate angle size using known benchmarks