

### Learning Intentions

#### YEAR 9

Unit: Number

Stage: Number Review

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At the end of this unit **all** pupils should be able to:

- List the multiples of a given whole number
- List all the factors of a given whole number
- Define a prime number and list the first 10 prime numbers
- Calculate the HCF and LCM of two numbers from a list
- Recall the square numbers up to  $12 \times 12$
- Work out the square root of a given square number
- Recall the cube of 2, 3, 4, 5 and 10
- Work out the cube root of a given cube number
- Use index notation to write repeated products of numbers more concisely.
- Multiply and divide positive and negative numbers
- Perform addition and subtraction calculations involving negative numbers, including directed numbers
- Use order of operation in numerical calculations

At the end of this unit **most** pupils should be able to:

- Express a number as a product of prime factors

At the end of this unit **some** pupils should be able to:

- Calculate the HCF and LCM of two numbers using their prime factor decomposition

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### **Learning Intentions**

#### **YEAR 9**

Unit: Number

Stage: The Calculator

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At the end of this unit **all** pupils should be able to:

- Round a number to a given number of decimal places
- Use the different functions of a calculator to include brackets, powers, roots, negative, fractions

### **Learning Intentions**

#### **YEAR 9**

Unit: Number

Stage: Percentages

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At the end of this unit **all** pupils should be able to:

- Convert a fraction to a percentage
- Convert a percentage to a fraction
- Express one number as a percentage of another
- Calculate the percentage of an amount
- Increase and decrease an amount by a given percentage

At the end of this unit **most** pupils should be able to:

- Use a decimal multiplier to calculate a percentage of an amount
- Solve real life percentage problems

At the end of this unit **some** pupils should be able to:

- Use a decimal multiplier to calculate a percentage increase and decrease
- Calculate a percentage increase or decrease
- Calculate compound interest using repeated iterations
- Calculate the original quantity given the result of a percentage change

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### **Learning Intentions**

#### **YEAR 9**

Unit: Number

Stage: Fractions

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At the end of this unit **all** pupils should be able to:

- Write a fraction in its simplest form
- Write one number as a fraction of another
- Calculate a fraction of an amount
- Compare the size of a fraction using a common denominator
- Add and subtract fractions with different denominators
- Multiply and divide fractions

At the end of this unit **most** pupils should be able to:

- Convert between mixed number and improper fractions

At the end of this unit **some** pupils should be able to:

- Add, subtract, multiply and divide fractions involving mixed numbers
- Converting a fraction to a recurring decimal
- Converting a recurring decimal to a fraction
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