National Curriculum Links

Links to the National Curriculum in England

# Chapter 18: Proportionality and percentages

Pupils should be taught to:

## Year 5

* solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates
* recognize the per cent symbol (%) and understand that per cent relates to ‘number of parts per hundred’, and write percentages as a fraction with denominator 100, and as a decimal
* solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those with a denominator of a multiple of 10 or 25

## Year 6

* recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
* solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
* solve problems involving the calculation of percentages [e.g., of measures and such as 15% of 360] and the use of percentages for comparison
* solve problems involving unequal sharing and grouping using knowledge of fractions and multiples

Links to Curriculum for Excellence in Numeracy and Mathematics in Scotland

# Chapter 18: Proportionality and percentages

## Second

***Experiences and outcomes:*** *I have investigated the everyday contexts in which … percentages … are used and can carry out the necessary calculations to solve related problems.* ***MNU 2-07a***

*I can show the equivalent forms of simple fractions, decimal fractions and percentages and can choose my preferred form when solving a problem, explaining my choice of method.* ***MNU 2-07b***

***Benchmark:***

* uses knowledge of equivalent forms of common fractions, decimal fractions and percentages, for example, 3 4 = 0.75 = 75%, to solve problems
* calculates simple percentages of a quantity, and uses this knowledge to solve problems in everyday contexts, for example, calculates the sale price of an item with a discount of 15%

Links to Curriculum for Wales: Programme of Study for Mathematics, Key Stages 2–4

# Chapter 18: Proportionality and percentages

Learners should be taught to:

## Year 5

* use doubling and halving strategies when working with simple proportions

## Year 6

* use understanding of simple fraction, decimal and percentage equivalences, e.g. find 25% of 60 cm and know that this is equivalent to ¼ of 60 cm
* calculate percentage quantities based on 10%, e.g. 20%, 5%, 15%
* use simple ratio and proportion

Australian Curriculum for Mathematics

This maps entries in the **Australian Mathematics Curriculum (from Foundation Stage to Year 7)** to the content of chapters of Haylock, *Mathematics Explained for Primary Teachers*, 6th edition.

# Chapter 18: Proportionality and percentages

## Year 6

* Make connections between equivalent fractions, decimals and percentages
* Investigate and calculate percentage discounts of 10%, 25% and 50% on sale items, with and without digital technologies

## Year 7

* Connect fractions, decimals and percentages and carry out simple conversions
* Find percentages of quantities and express one quantity as a percentage of another, with and without digital technologies