## Examples of what children should be able to do, in relation to each (boxed) Programme of Study statement

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

Children should be able to circle the two fractions that have the same value, or choose which one is the odd one out and justify their decision.  
6⁄10, 3⁄5, 18⁄20,9⁄15

**identify, name and write equivalent fractions of a given fraction, represented visually ,including tenths and hundredths**

**recognise mixed numbers and improper fractions and convert from one form to the other. Write mathematical statements >1 as a mixed number**

Put the correct symbol, < or >, in each box.

3.03 ☐ 3.3  
0.37 ☐ 0.327  
Order these numbers: 0.27 0.207 0.027 2.07 2.7

 (e.g. ⅖ + ⅘ = 6⁄5 = 1⅕)

 How many halves in: 1 ½ 3 ½ 9 ½ …?

How many quarters in 1 ¼ 2 ¼ 5 ¼ ….?

**add and subtract fractions with the same denominator and denominators that are multiples of the same number**

**multiply proper fractions and mixed numbers by whole numbers**

What is 3⁄10 of: 50, 20, 100…?

What is ⅘ of 50, 35, 100….?

**read and write decimal numbers as fractions (e.g. 0.71 = 71⁄100)**

What decimal is equal to 25 hundredths?

Write the total as a decimal:

4 + 6⁄10 + 2⁄100 =

Children partition decimals using both decimal and fraction notation, for example, recording 6.38 as 6 + 3⁄10 + 8⁄100 and as 6 + 0.3 + 0.08.

**recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents**

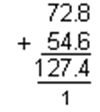
Recognise that  
0.007 is equivalent to 7⁄1000  
6.305 is equivalent to 6305⁄100

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

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

Write these numbers in order of size, starting with the smallest. 1.01, 1.001, 1.101, 0.11

**solve problems involving numbers with up to three decimal places**



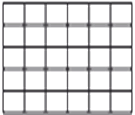
8 tenths add 6 tenths makes 14 tenths, or 1 whole and 4 tenths. The 1 whole is 'carried' into the units column and the 4 tenths is written in the tenths column

**recognise the per cent symbol (%) and understand that per cent relates to ‘number of parts per hundred’**

Write in the missing numbers. 30% of 60 is ☐  
30% of ☐ is 60

**write percentages as a fraction with denominator 100, and as a decimal**

Shade 10% of this grid.



Which is bigger: 65% or ¾? How do you know?

What percentage is the same as 7⁄10? Explain how you know?

What is 31⁄100 as a percentage?

Which is a better mark in a test: 61% , or 30 out of 50? How do you know?

**solve problems which require knowing percentage and decimal equivalents of 1⁄2,1⁄4,1⁄5, 2⁄5 and those fractions with a denominator of a multiple of 10 or 25.**

## Non-Statutory Guidance

Pupils should be taught throughout that percentages, decimals and fractions are different ways of expressing proportions.

They extend their knowledge of fractions to thousandths and connect to decimals and measures.

Pupils connect equivalent fractions > 1 that simplify to integers with division and other fractions > 1 to division with remainders, using the number line and other models, and hence move from these to improper and mixed fractions.

Pupils connect multiplication by a fraction to using fractions as operators (fractions of), and to division, building on work from previous years. This relates to scaling by simple fractions, including fractions > 1.

Pupils practise adding and subtracting fractions to become fluent through a variety of increasingly complex problems. They extend their understanding of adding and subtracting fractions to calculations that exceed 1 as a mixed number.

Pupils continue to practise counting forwards and backwards in simple fractions.

Pupils continue to develop their understanding of fractions as numbers, measures and operators by finding fractions of numbers and quantities.

Pupils extend counting from year 4, using decimals and fractions including bridging zero, for example on a number line.

Pupils say, read and write decimal fractions and related tenths, hundredths and thousandths accurately and are confident in checking the reasonableness of their answers to problems.

They mentally add and subtract tenths, and one-digit whole numbers and tenths.

They practise adding and subtracting decimals, including a mix of whole numbers and decimals, decimals with different numbers of decimal places, and complements of 1 ( for example, 0.83 + 0.17 = 1).

Pupils should go beyond the measurement and money models of decimals, for example, by solving puzzles involving decimals.

Pupils should make connections between percentages, fractions and decimals(for example, 100% represents a whole quantity and 1% is 1⁄100, 50% is 50⁄100, 25% is 25⁄100) and relate this to finding ‘fractions of’.