**Content domain – fractions, decimals and percentages**

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| **Strand** | **National Curriculum reference Year 1** | **National Curriculum reference Year 2** | **National Curriculum reference Year 3** | **National Curriculum reference Year 4** | **National Curriculum reference Year 5** | **National Curriculum reference Year 6** |
| **F1**  Recognise, find, write, name and count fractions | **1F1a**  Recognise, find and name a half as one of two equal parts of an object, shape or quantity | **2F1a**  Recognise, find, name and write fractions 1/3, ¼ , 2/4 and ¾ of a length, shape, set of objects or quantity | **3F1a**  Count up and down in  tenths; recognise that  tenths arise from dividing  an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 | **4F1**  Count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten |  |  |
| **1F1b**  Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity | **2F1b**  Write simple fractions [e.g.: ½ of 6 = 3] | **3F1b**  Recognise, find and write  fractions of a discrete set  of objects: unit fractions  and non-unit fractions  with small denominators |  |  |  |
| **F2**  Equivalent fractions |  |  | **3F1c**  Recognise and use  fractions as numbers:  unit fractions and non-unit fractions with small  denominators |  |  |  |
|  | **2F2**  Recognise the equivalence of 2/4 and ½ | **3F2**  Recognise and show, using diagrams, equivalent fractions with small denominators | **4F2**  Recognise and show, using diagrams, families of common  equivalent fractions | **5F2a**  Recognise mixed numbers and improper fractions and convert from one form to the other; write mathematical statements >1 as a mixed number [e.g.: 2/5 + 4/5 = 6/5= 1 1/5] | **6F2**  Use common factors to simplify fractions; use common multiples to express fractions in the same denomination |
| **F3**  Comparing and ordering fractions [KS2] |  |  |  |  | **5F2b**  Identify name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths |  |
|  |  | **3F3**  Compare and order unit fractions and fractions with the same denominators |  | **5F3**  Compare and order fractions whose denominators are all multiples of the same number | **6F3**  Compare and order  fractions, including  fractions >1 |
| **F4**  Add / subtract fractions [KS2] |  |  | 3F4  Add and subtract fractions with the same denominator within one whole [e.g.: 5/7 + 1/7= 6/7] | **4F4**  Add and subtract fractions with the same denominator | **5F4**  Add and subtract fractions with the same denominator and denominators that are multiples of the same number | **6F4**  Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions |
| **F5**  Multiply / divide fractions [KS2] |  |  |  |  | **5F5**  Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams | **6F5a**  Multiply simple pairs of proper fractions, writing the answer in its simplest form [e.g.: ¼ × ½ = 1/8] |
|  |  |  |  |  | **6F5b**  Divide proper fractions by whole numbers [e.g.: 1/3 ÷ 2 = 1/6] |
| **F6**  Fractions / decimals equivalence |  |  |  | **4F6a**  Recognise and write decimal equivalents to ¼, ½, 3/4 | **5F6a**  Read and write decimal numbers as fractions [e.g.: 0.71 = 71/100] | **6F6**  Associate a fraction with division to calculate decimal fraction equivalents (e.g.: 0.375) for a simple fraction [e.g.: 3/8] |
|  |  |  | **4F6b**  Recognise and write decimal equivalents of any number of  tenths or hundredths | **5F6b**  Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents |  |
| **F7**  Rounding decimals [KS2] |  |  |  | **4F7**  Round decimals with one decimal place to the nearest whole number | **5F7**  Round decimals with two decimal places to the nearest whole number and to one decimal place |  |
| **F8**  Compare and order decimals [KS2] |  |  |  | **4F8**  Compare numbers with the same number of decimal places up to two decimal places | **5F8**  Read, write, order and compare numbers with up to three decimal places |  |
| **F9**  Multiply / divide decimals [KS2] |  |  |  | **4F9**  Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths |  | **6F9a**  Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places |
|  |  |  |  |  | **6F9b**  Multiply one-digit numbers with up to two decimal places by whole numbers |
|  |  |  |  |  | **6F9c**  Use written division methods in cases where the answer has up to two decimal places |
| **F10**  Solve problems with fractions and decimals [KS2] |  |  | **3F10**  Solve problems that involve 3F1–3F4 | **4F10a**  Solve problems involving increasingly harder fractions to calculate quantities and fractions to divide quantities, including non-unit fractions where the answer is a whole number | **5F10**  Solve problems involving  numbers up to three  decimal places | **6F10**  Solve problems which require answers to be rounded to specified degrees of accuracy |
|  |  |  | **4F10b**  Solve simple measure and money problems involving fractions and decimals to two decimal places |  |  |
| **F11**  Fractions / decimal / percentage equivalence [KS2] |  |  |  |  | **5F11**  Recognise the per cent symbol (%) and understand that per cent relates to ‘number of parts per hundred’; write percentages as a fraction with denominator hundred, and as a decimal | **6F11**  Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts |
| **F12**  Solve problems with percentages [KS2] |  |  |  |  | **5F12**  Solve problems which require knowing percentage and decimal equivalents of ½, ¼, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25 |  |