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| **Fractions, Decimals, Percentages, Proportions and Ratios** |
| **Stage 2-3 Level 1** |
| **Name: Year:**  |
| I am learning to... | Date Achieved |
| **Knowledge** | **Beginning** | **Developing** | **Transitioning** |
| Read  | Read ½ and ¼  |  |  |  |
| Know | Doubles to 10 and halves to 10 |  |  |  |
| **Strategy** |
| Find sets | I can find a fair share of a set using materialse.g. Share 6 marbles between 2 people - find it is 3 using equipment |  |  |  |
| Find parts of objects | I can find halves and quarters of shapes and objectse.g. Share the licorice strap between you and your friend |  |  |  |

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| **Fractions, Decimals, Percentages, Proportions and Ratios** |
| **Stage 4 Level 1** |
| **Name: Year:**  |
| I am learning to... | Date Achieved |
| **Knowledge** | **Beginning** | **Developing** | **Transitioning** |
| Read  | Unit Fractions ½, ¼, ⅓, ⅕  |  |  |  |
| Know | Doubles to 20 and halves to 20 |  |  |  |
| **Strategy** |
| Find a fraction of a set | By equal sharing - using materialsUsing skip counting - known doubles or halves to help solve problemse.g. ½ of 20 = 10 (using known doubles) |  |  |  |
| Share a shape into equal parts | Show halves, quarters, thirds, fifths etc… On a shape by drawing |  |  |  |
| Find a fraction of a shape/object | By using fold symmetry to create halves, quarters and eights |  |  |  |

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| **Fractions, Decimals, Percentages, Proportions and Ratios** |
| **Stage 5 Level 2** |
| **Name: Year:**  |
| I am learning to... | Date Achieved |
| **Knowledge** | **Beginning** | **Developing** | **Transitioning** |
| Read  | Most Fractions - ½ , ⅓, ¼ , ⅕, 1/10  |  |  |  |
| Order | Fractions with the same denominator ¼ > ¾ |  |  |  |
| Explain | Why I have ordered the fractions in this way |  |  |  |
| Know | The symbols for improper fractions |  |  |  |
| **Strategy** |
| Find a fraction of a number | By using halving, known addition facts or some simple multiplication factse.g. ⅓ of 12 is 4 because 3+3+3 = 9 so 4+4+4 = 12 |  |  |  |
| Solve Division Problems with remainders | By using halving, known addition facts or some simple multiplication facts e.g. 7 pies shared between 4 people (7÷4) by giving each person 1 pie and ½ a pie and then ¼ of a pie |  |  |  |

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| **Fractions, Decimals, Percentages, Proportions and Ratios** |
| **Stage 6 Level 3** |
| **Name: Year:**  |
| I am learning to... | Date Achieved |
| **Knowledge** | **Beginning** | **Developing** | **Transitioning** |
| Read | Decimals up to three places, for example, 0.764; 0.14; 0.8 |  |  |  |
| Read | Symbols for any fraction, for example: 11/3  4/5 13/3 |  |  |  |
| Order | Fractions with the different denominators, for example, 1/4  2/3 4/5 |  |  |  |
| Round | Decimals to the nearest whole number, For example, 3.49 3 |  |  |  |
| **Strategy** |
| Use repeated halving or known facts to: | Find fractions of a set or regione.g. ¾ of 24, ¼ of 24 = 6 so 3×6 = 18 so ¾ of 24 is 18 |  |  |  |
| Renaming improper fractions e.g. 16/3 = 5 1/3 |  |  |  |
| Division with remainderse.g. 8 pies shared with 3 people by giving each person 2 pies and dividing the remaining 2 pies into thirds. 2 + ⅓ + ⅓ = 2 ⅔  |  |  |  |
| Add and subtract fractions |  |  |  |
| Use repeated copying: | To solve simple problems involving ratios and rates.e.g. 2:3 - 4:6 - 8:12 |  |  |  |

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| **Fractions, Decimals, Percentages, Proportions and Ratios** |
| **Stage 7 Level 4** |
| **Name: Year:**  |
| I am learning to... | Date Achieved |
| **Knowledge** | **Beginning** | **Developing** | **Transitioning** |
| Count | Forwards and backwards in 0.001s, 0.01, 0.1s, ones, tens, |  |  |  |
| Say | Number 0.001, 0.01, 0.1, 1, 10 before / after any whole number |  |  |  |
| Order | Decimals up to three places, for example 6.25 and 6.3 |  |  |  |
| Order | I can order more difficult fractions e.g. Which fraction is the smallest, 3/8 4/10 1/3 ? 1/3 |  |  |  |
| Know | Equivalent fractions and proportions for 1/2’S 1/3 ‘S 1/4 ‘S  1/5’S 1/10’S with denominators of 10, 100, 1 000, for example, 1/4 = 25/100 |  |  |  |
| Recall | Fraction decimal percentage conversions for 1/2’S 1/3 ‘S 1/4 ‘S  1/5’S and 1/10’S for example 3/4 = 0.75 = 75% |  |  |  |
| **Strategy** |
| Solve + and - problems with decimals: | Compensation from tidy numbers,e.g. 3.2 + 1.95 as 3.2 + 2 – 0.05Place valuee.g. 8.65 – 4.2 = (8-4) + (0.6 – 0.2) + 0.05or 8.65 – 4 = 4.65 then 4.65 – 0.2 = 4.45Reversibility and Commutativitye.g. 6.03 – 5.8 = □ as 5.8 + □ = 6.03 (reversibility)e.g. □ + 3.98 = 7.04 as 3.98 + □ 7.04 (Commutativity)Equal Additionse.g. 7.24 - 3.8 as 7.44 – 4.0 = 3.44Negative Numberse.g. 6.4 – 2.5 as 0.4 – 0.5 is -0.1;6.0 - 2.0 = 4.0 – 0.1 = 3.9Decompositione.g. 9.25 – 6.83 as 8.125-6.83 |  |  |  |
| I can use a range of multiplication and division strategies to estimate and solve problems with fractions, proportions and ratios | Use perentagese.g. I got 36/50 goals and Sera got 16/20. Who got the better shot?36/50 = 2×36 so 72%, while 16/20 = ⅘ and ⅘ = 80% - Sera is the better shot |  |  |  |
| Use basic common factors to multiply between ratios3:5 as \_:40, 8×5 = 40,8×3 = 24, so \_ = 24 |  |  |  |
| Express division answers as remainders as mixed numbers and fractionse.g. 24 ÷ 5 = 24/5 = 4 ⅘ e.g. 13 pies to share with 5 people. 13÷5 = (10÷5) = (3÷5) = 2/35 |  |  |  |
| Use unit fractionse.g., 4/9 x 18 as (1/9 x 18) x4e.g. Sam is 16 and is 2/3’s of my age. How old am I?⅓ is 8 so 3×8 = 24 |  |  |  |
| I can multiply and divide fractions |  |  |  |  |

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| **Fractions, Decimals, Percentages, Proportions and Ratios** |
| **Stage 8 Level 5** |
| **Name: Year:**  |
| I am learning to... | Date Achieved |
| **Knowledge** | **Beginning** | **Developing** | **Transitioning** |
| Know | How to simplify fractions |  |  |  |
| Recall | More difficult fraction, decimal percentage conversionsWhich is the smallest? 2/3 , 0.6 or 70 % = 0.6 |  |  |  |
| Order | More difficult fractions ¾, 73/100, 7/10? = 3/4 |  |  |  |
| Order | I can order more difficult fractions e.g. Which fraction is the smallest, 3/8 4/10 1/3 ? 1/3 |  |  |  |
| Know | More difficult decimal to percentage conversionsWhat is 1.3 written as a percentage? 130%  |  |  |  |
| **Strategy** |
| Solve × and ÷ problems with fractions and decimals by: | Using standard place value, reversing, and compensating from tidy numbers, e.g. 0.7 × 3.9 =  as 0.7 × 3 = 2.1, 0.7 × 0.9 = 0.63, and 2.1 + 0.63 = 2.73.  |  |  |  |
| Converting from fractions to decimals to percentages, e.g. 80% of 53 =  as 8 × 10 1 × 53 = 8 × 5.3 = 42.4.  |  |  |  |
| Solve problems that involve combining different proportions  | Using weighting or averaging, e.g. 25% of 36 combined with 75% of 24 gives 27 out of 60 (45% of 60).  |  |  |  |
| Solve problems with fractions, ratios and proportions by | Partitioning fractions and percentages, e.g. 85% of 36 =  as 10% of 36 = 3.6, 5% of 36 = 1.8, so 36 – 3.6 – 1.8 = 30.6. |  |  |  |
| Using common factors to multiply between and within ratios, e.g. 8:12 as :21 as 8:12 = 2:3 (common factor of 4) so 2:3 = 14:21 (multiplying by 7).  |  |  |  |