St Mary's RC Primary School
Fraction Written Methods Calculation Policy

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition and Subtraction					
		Add and subtract fractions with the same denominator within one whole. <u>Addition</u> $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$ <u>Subtraction</u> $\frac{3}{4} - \frac{1}{4} = \frac{2}{4}$ *Step 1. The denominators are already the same.* *Step 2. Subtract/add the numerator and put the answer over the same denominator.*	Add and subtract fractions with the same denominator. [Same as Year 3] Simplify answers e.g. $\frac{2}{4} = \frac{1}{2}$	Add and subtract fractions with the same denominator [Year 3/4] and denominators that are multiples of the same number. Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example $\frac{23}{10} = 2\frac{3}{10}$] <u>Addition</u> Example 1: Make the denominator the same [Y3/4] x2 x2 $\frac{5}{6} + \frac{7}{12} = —$ "Whatever you do to the denominator you do to the numerator" $\frac{10}{12} + \frac{7}{12} = \frac{17}{12} = 1\frac{5}{12}$ <u>Subtraction</u> $1\frac{2}{5} - \frac{19}{20} = —$ Convert mixed number to an improper fraction x4 $\frac{7}{5} - \frac{19}{20} = —$ x4 $\frac{28}{20} - \frac{19}{20} = \frac{9}{20}$	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. <u>Addition</u> $4\frac{5}{6} + 2\frac{7}{12} = —$ $4\frac{10}{12} + 2\frac{7}{12} = 6\frac{17}{12} = 6 + 1\frac{5}{12} = 7\frac{5}{12}$ <u>Subtraction</u> x4 x5 $6\frac{1}{5} - \frac{3}{4} = —$ x4 x5 $6\frac{4}{20} - \frac{15}{20} = —$ Use one from the whole [in this case $\frac{20}{20}$]. $5\frac{4+20}{20} - \frac{15}{20} = —$ $5\frac{24}{20} - \frac{15}{20} = 5\frac{9}{20}$

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Multiplication and Division					
				Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. Diagram [Pictorial] (Cuisenaire rods for Concrete in the same way): This is $\frac{2}{3}$.  Use this to calculate $\frac{2}{3} \times 5 = \frac{10}{3} = 3\frac{1}{3}$.  Abstract calculation: $\frac{5}{8} \times 4 = —$ Children to understand that every whole number has a denominator of 1. $\frac{5}{8} \times \frac{4}{1} = \frac{20}{8} = 2\frac{4}{8} = 2\frac{1}{2}$	Multiply simple pairs of proper fractions, writing the answer in its simplest form Example: $\frac{5}{4} \times \frac{3}{2} = \frac{15}{8} = \frac{7}{8}$ Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$] Example: $\frac{1}{2} \div 2 = —$ $\frac{1}{2} \div \frac{2}{1} = —$ $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$