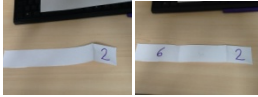


# The Stour Academy Trust Mathematics Calculation Policy: Fractions

	Year R	Year 1	Year 2
<b>FRACTIONS</b>	<ul style="list-style-type: none"> <li>Solve practical problems involving sharing and halving.</li> </ul> <p>Through practical situations, including role play, the children will find halve of different amounts and objects.</p> <p>Through practical situations, including role play, the children will share different amounts and objects.</p>	<ul style="list-style-type: none"> <li>Recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity</li> <li>Recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity</li> </ul> <p>In year 1, children will use practical objects, including within their role play and outside areas to find <math>\frac{1}{2}</math> and <math>\frac{1}{4}</math> of different amounts and shapes.</p> <p><u>Bar Model</u> using strips of paper, children will find <math>\frac{1}{2}</math> and <math>\frac{1}{4}</math> by folding and cutting different sizes and shapes in order to support their understanding of fractions.</p>	<ul style="list-style-type: none"> <li>Recognise, find, name and write fractions <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, <math>\frac{2}{4}</math> and <math>\frac{3}{4}</math> of a length, shape, set of objects or quantity.</li> <li>Write simple fractions, for example <math>\frac{1}{2}</math> of 6 = 3 and recognise the equivalence of <math>\frac{2}{4}</math> and <math>\frac{1}{2}</math>.</li> </ul> <p>Children will use practical resources to support their fractions work, for example cubes, in order to support their calculations.</p> <p>In addition to manipulatives, the Bar Model will be used to solve problems. This is not always recorded in books, but can be used as a strip of paper.  <i>e.g. Lauren has some cherries. She eats 2 of them. Then she eats half of what is left. She now has 6 cherries. How many did she start with?</i></p> 

# The Stour Academy Trust Mathematics Calculation Policy: Fractions

## FRACTIONS

### Year 3

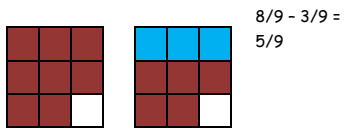
- Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.
- Add and subtract fractions with the same denominator within one whole using diagrams.
- Solve problems that involve all of the above

Children will be shown fractions on a counting stick and count up and down in fractions e.g. tenths

- Show fractions on a rectangular model and use this to add fractions with the same denominator within one whole.  
 $2/9 + 4/9 = 6/9$



- Show fractions on a rectangular model (could use numicon) to subtract fractions with the same denominator



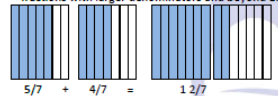
Children in year 3, will also be expected to use the bar model to support them in solving problems involving fractions. This will sometimes be practical but other times by recorded.  
e.g. David spent  $1/4$  of his money on a book. The book cost £10. How much money did he start off with?



### Year 4

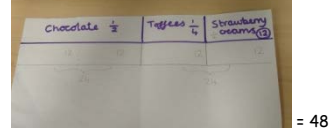
- Add and subtract fractions with the same denominator using diagrams
- Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number

- Use a rectangular model to add and subtract fractions with the same denominator, using fractions with larger denominators and beyond 1



Children will again, use the bar model to support their problem solving when solving problems.

e.g.  $1/2$  of the sweets in the tin were chocolates.  $1/4$  were toffees. The rest were strawberry creams. There were 12 strawberry creams. How many sweets were in the tin?

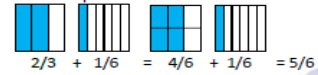


### Year 5

- Add and subtract fractions with the same denominator and multiples of the same number

In year 5, children are taught to find the lowest common denominator in order to add and subtract fractions effectively. They will continue to use the rectangular model to support their addition and subtraction.

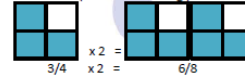
e.g.



- Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams

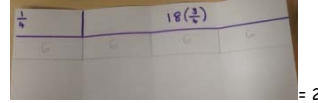
Children are taught how to multiply fractions using the rectangular model. They draw a representation of the fraction (in a rectangle which they have been using since year 3) and recreate it as many times as they are multiplying it.

e.g.



The Bar Model will again be used to support problem solving. In year 5, the problems begin to become more complex and children will need to use their understanding of the bar model to work through the problem.

e.g. In a class, 18 of the children are girls. A quarter of the class are boys. Altogether, how many children are in the class?



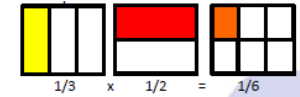
### Year 6

- Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions

Children will use the rectangular method to continue adding and subtracting fractions however they will begin to develop their own methods of recording and converting between mixed and improper fractions.

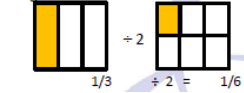
- Multiply simple pairs of proper fractions, writing the answer in its simplest form using diagrams such as rectangular model

e.g.  $1/3 \times 1/2 = 1/6$



- Divide proper fractions by whole numbers (e.g.  $1/3 \div 2 = 1/6$ ) using a rectangular model

e.g.  $1/3 \div 2 = 1/6$



The Bar Model will continue to be used to approach problems involving fractions (which in year 6 will be more complex) as well as percentages and ratio.

e.g. A shop keeper sold  $1/3$  of his balloons in the afternoon and  $2/5$  of the remainder in the evening. If he had 150 balloons left, find the number of balloons he had at first.

