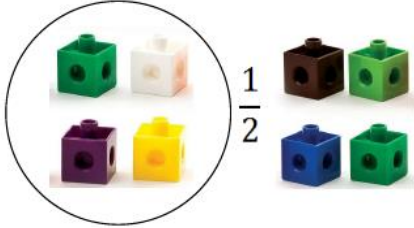
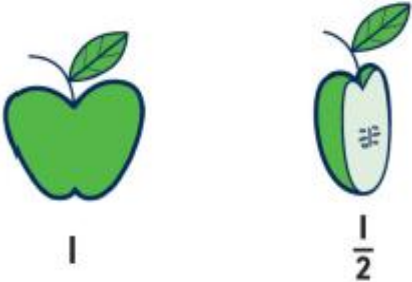
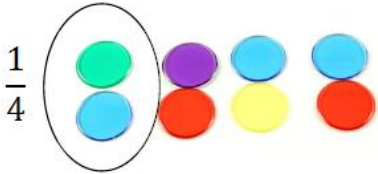
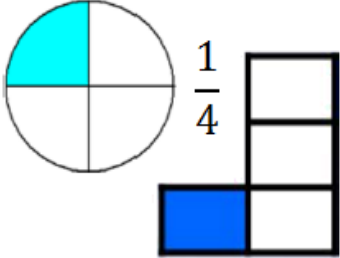
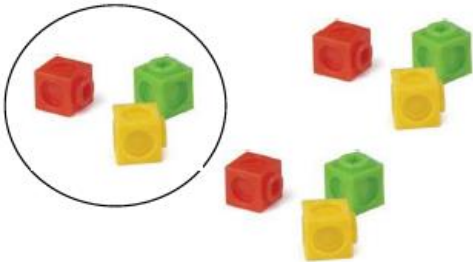
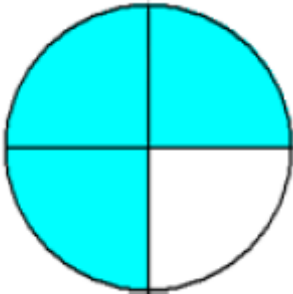
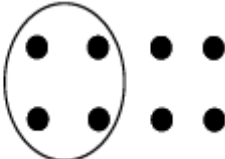
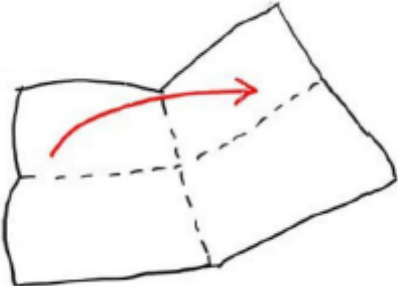



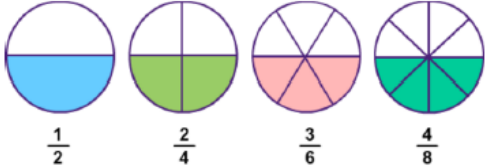
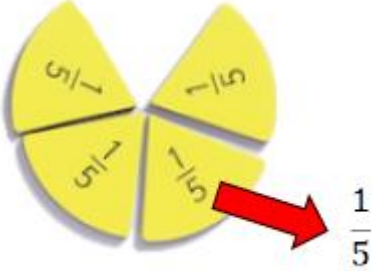
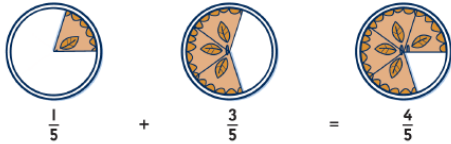
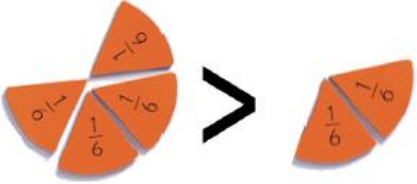
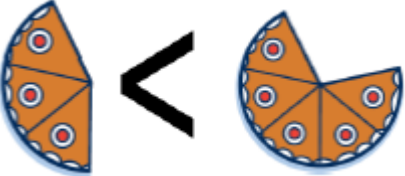


Year 1			
Objective / Strategy	Concrete	Pictorial	Abstract
<p>Recognise, find and name a half as one of two equal parts of an object, shape or quantity.</p>		<p>A whole apple      Half an apple</p>  <p>1                      1/2</p>	<p>Half of 10 =</p> <p>Half of 8 =</p> <p>1/2 of 14 =</p>
<p>Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.</p>		 <p>1/4</p>	<p>A quarter of 20 =</p> <p>A quarter of 12 =</p> <p>1/4 of 8 =</p>

Year 2			
Objective / Strategy	Concrete	Pictorial	Abstract
<p>Recognise, find and 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.</p>			<p><math>\frac{2}{4}</math> of 8 = <input style="border: 1px solid purple; width: 40px; height: 30px;" type="text"/></p> 
<p>Write simple fractions and recognise the equivalence of <math>\frac{2}{4}</math> and <math>\frac{1}{2}</math>.</p>		 <p>I have <math>\frac{1}{2}</math> a pie You have <math>\frac{2}{4}</math> of a pie</p>	<p><math>\frac{1}{2}</math> of 6 = <input style="border: 1px solid purple; width: 40px; height: 30px;" type="text"/></p> 

Year 3			
Objective / Strategy	Concrete	Pictorial	Abstract
<p>Count up and down in tenths: recognise that tenths arise from dividing an object into ten equal parts and in dividing one-digit numbers or quantities by ten.</p>	<p>Fractions can also go beyond 1</p>		<p><math>\frac{1}{10}</math> of 6 = 0.6 because <math>6 \div 10 = 0.6</math></p> <p><math>\frac{1}{10}</math> of 7 = 0.7 because <math>7 \div 10 = 0.7</math></p>
<p>Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions and use fractions as numbers.</p>			<p><math>\frac{1}{5}</math> of 15 sweets = 3 <math>15 \div 5 = 3</math></p> <p><math>\frac{2}{5}</math> of 15 sweets = 6 <math>15 \div 5 = 3</math> and <math>3 \times 2 = 6</math></p>

<p>Recognise and show, using diagrams, equivalent fractions with small denominators.</p>	 <p>two halves <math>\frac{2}{2}</math>      four quarters <math>\frac{4}{4}</math></p>	 <p><math>\frac{1}{2}</math>      <math>\frac{2}{4}</math>      <math>\frac{3}{6}</math>      <math>\frac{4}{8}</math></p>	<p>Sam says that two quarters is the same as one half. Is he correct? How do you know?</p>
<p>Add and subtract fractions with the same denominator.</p>		 <p><math>\frac{1}{5} + \frac{3}{5} = \frac{4}{5}</math></p>	$\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$ $\frac{5}{8} - \frac{2}{8} = \frac{3}{8}$
<p>Compare and order unit fractions with the same denominators.</p>			<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px;"><math>\frac{2}{8}</math></div> <div style="border: 1px solid black; padding: 5px;"><math>\frac{3}{8}</math></div> <div style="border: 1px solid black; padding: 5px;"><math>\frac{5}{8}</math></div> <div style="border: 1px solid black; padding: 5px;"><math>\frac{7}{8}</math></div> </div>


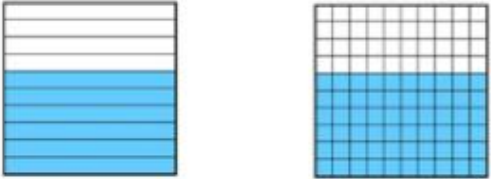
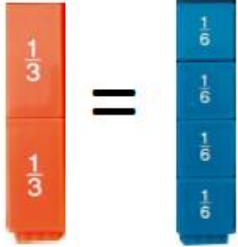
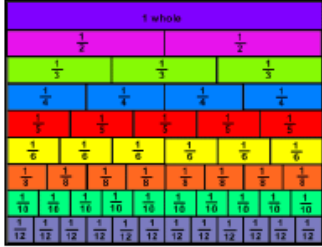
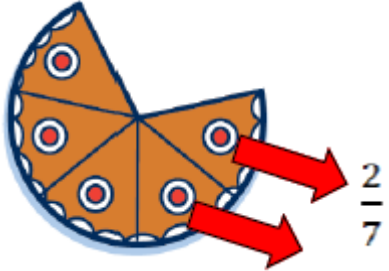
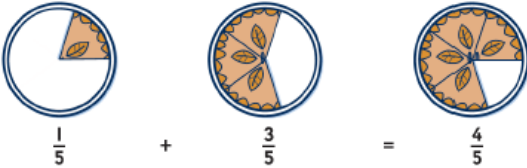
Calculation policy



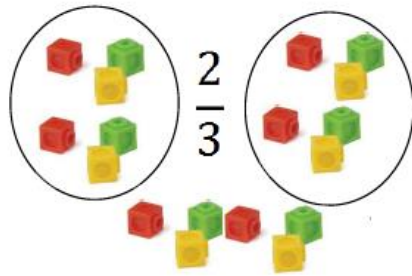
Fractions



Year 4			
Objective / Strategy	Concrete	Pictorial	Abstract
<p>Count up and down in hundredths: recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10.</p>			<p><math>\frac{1}{100}</math> of 60 = 0.6 because <math>60 \div 100 = 0.6</math></p> <p><math>\frac{1}{10}</math> of 70 = 0.7 so <math>\frac{1}{100}</math> of 70 = 0.07</p>
<p>Recognise and write decimal equivalents to <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math> and <math>\frac{3}{4}</math>.</p>			<p><math>\frac{1}{2} = 0.5</math> <math>\frac{1}{4} = 0.25</math> <math>\frac{3}{4} = 0.75</math></p>

<p>Recognise and write decimal equivalents of any number of tenths or hundredths.</p>	 <p><math>\frac{1}{10}</math> of the chocolate bar = 0.1</p>	 <p><b>0.6</b> six tenths</p> <p><b>0.60</b> sixty hundredths</p>	$\frac{1}{10} = 0.1$ $\frac{3}{10} = 0.3$ $\frac{5}{10} = \frac{1}{2} = 0.5$ $\frac{8}{100} = 0.08$
<p>Recognise and show, using diagrams, families of common equivalents.</p>			$\frac{2}{3} = \frac{4}{6}$ $\frac{3}{5} = \frac{6}{10}$ $\frac{2}{12} = \frac{1}{6}$
<p>Add and sub-tract fractions with the same denominator.</p>			<p>Sam eats <math>\frac{2}{7}</math> of a whole pizza. How much does he have left?</p>

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.






$$\frac{2}{3} \text{ of } \pounds 18$$

$$\pounds 18 \div 3 = \pounds 6$$

$$\pounds 6 \times 2 = \pounds 12$$

Solve simple measure and money problems involving fractions and decimals to two decimal places.



<b>o</b>	.	<b>t</b>	<b>h</b>
<b>Units</b>	<b>Decimal Point</b>	<b>Tenths</b>	<b>Hundredths</b>
	.		

$$100\text{cm} = 1\text{m}$$

$$50\text{cm} = \frac{1}{2} = 0.5\text{m}$$

$$25\text{cm} = \frac{1}{4} = 0.25\text{m}$$

$$10\text{cm} = \frac{1}{10} = 0.1\text{m}$$

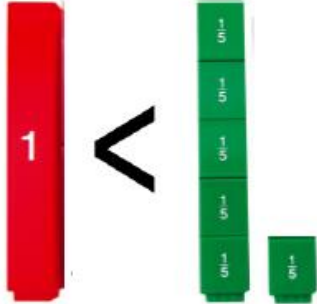
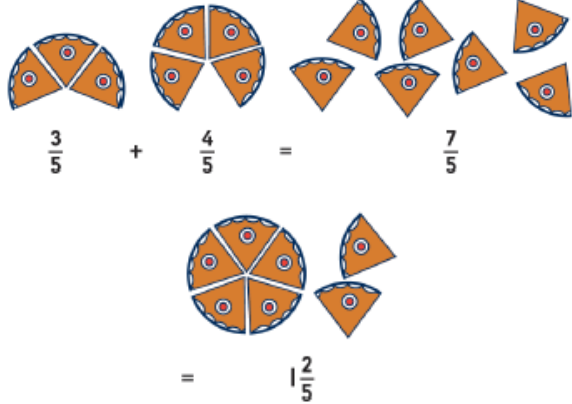



$$30\text{cm} = \frac{3}{10} = 0.3\text{m}$$



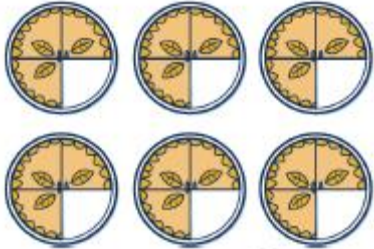


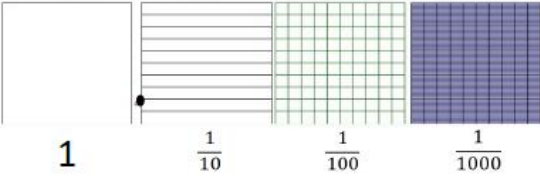
Year 5			
Objective / Strategy	Concrete	Pictorial	Abstract
<p>Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.</p>		$\frac{6}{10} = \frac{60}{100}$	$\frac{3}{5} = \frac{6}{10} = \frac{60}{100}$ $\frac{3}{4} = \frac{75}{100}$ $\frac{1}{5} = \frac{2}{10} = \frac{20}{100}$
<p>Compare and order fractions whose denominators are all multiples of the same number.</p>			



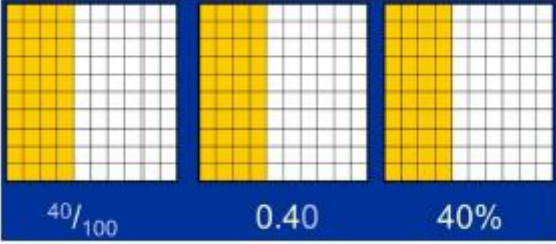
# Calculation policy

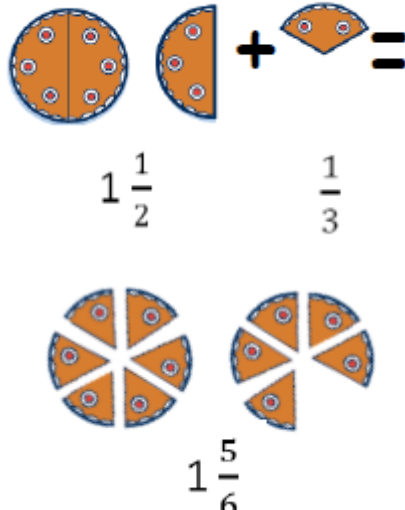
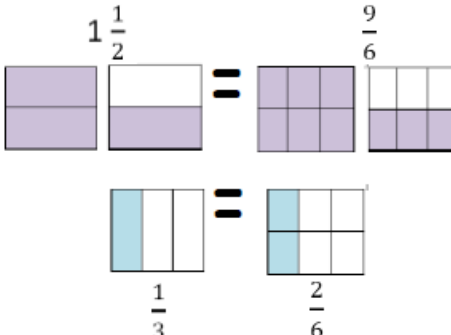
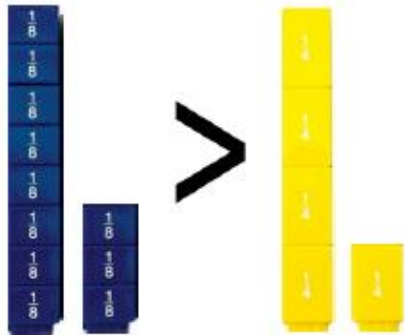
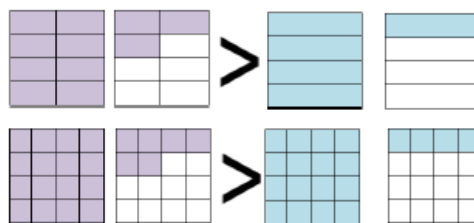
# Fractions

<p>Recognise mixed numbers and improper fractions. Convert from one form to the other and write mathematical statements &gt; 1 as a mixed number.</p>			$\frac{7}{2} = 3\frac{1}{2}$ <p>because <math>7 \div 2 = 3</math> with 1 half left over</p> $2\frac{1}{3} = \frac{7}{3}$ <p>because <math>2 \times 3 = 6</math> with 1 third left to add</p>
<p>Add and subtract fractions with the same denominators and denominators that are multiples of the same numbers.</p>	 <p>So,</p> $\frac{8}{20} + \frac{5}{20} = \frac{13}{20}$ $\frac{2}{5} + \frac{1}{4} = \frac{13}{20}$		$\frac{2}{5} - \frac{1}{4}$  $\frac{8}{20} - \frac{5}{20} = \frac{3}{20}$ $\frac{2}{5} - \frac{1}{4} = \frac{3}{20}$



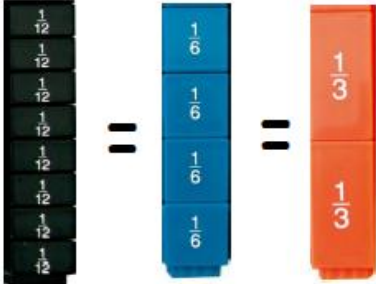

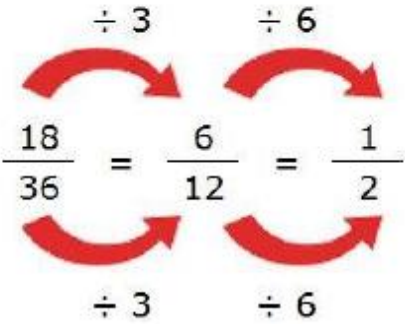
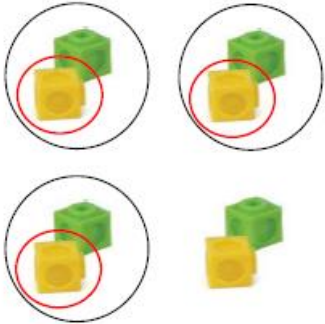

<p>Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.</p>	 <p>6 lots of <math>\frac{3}{4}</math></p>	<p>.....leads to...</p>  <p><math>4\frac{2}{4}</math> altogether</p>	$\frac{3}{4} \times 6 = \frac{18}{4}$ <p>Change to a mixed number:</p> $\frac{18}{4} = 4\frac{2}{4}$
<p>Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.</p>		 <p>1      <math>\frac{1}{10}</math>      <math>\frac{1}{100}</math>      <math>\frac{1}{1000}</math></p>	<p><b>67.153</b></p> <p>How many thousandths does this number have? How many more thousandths do you need to add to make 67.16?</p>

<p>Recognise % symbol as meaning hundredths; write % as a fraction, decimal and percentage.</p>		<p style="text-align: center;"><b>SALE</b></p>  	$\frac{4}{10} = 40\% = 0.4$ $\frac{32}{100} = 32\% = 0.32$ $\frac{75}{100} = 75\% = 0.75$ $\frac{2}{25} = \frac{8}{100} = 8\% = 0.08$
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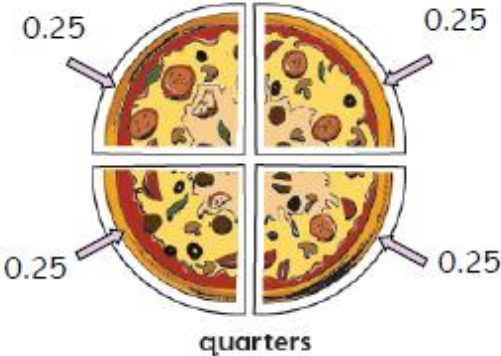
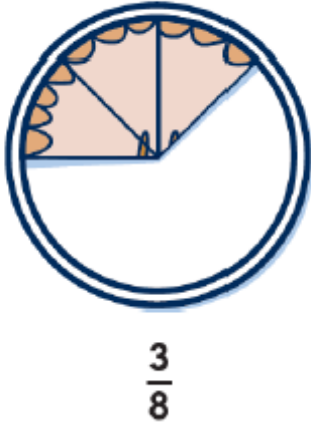
Year 6			
Objective / Strategy	Concrete	Pictorial	Abstract
<p>Add and subtract fractions with different denominators and mixed numbers using the concept of equivalent fractions.</p>	 <p><math>1 \frac{1}{2} + \frac{1}{3} = 1 \frac{5}{6}</math></p>	 <p><math>1 \frac{1}{2} + \frac{1}{3} = 1 \frac{5}{6}</math></p>	<p><math>1 \frac{1}{2} + \frac{1}{3} = 1 \frac{5}{6}</math></p> <p>because <math>1 \frac{1}{2} = \frac{3}{2}</math></p> <p><math>\frac{3}{2} = \frac{9}{6}</math> and <math>\frac{1}{3} = \frac{2}{6}</math></p> <p>so <math>\frac{9}{6} + \frac{2}{6} = \frac{11}{6} = 1 \frac{5}{6}</math></p>
<p>Compare and order fractions including fractions &gt; 1.</p>	 <p><math>1 \frac{1}{8} &gt; 1 \frac{1}{4}</math></p>	 <p><math>\frac{5}{8} &gt; \frac{6}{16}</math></p>	<p>Which is greater?</p> <p><math>\frac{5}{8} &lt; \frac{6}{16}</math></p> <p>Ordering from smallest to largest by using equivalent fractions:</p> <p><math>\frac{5}{12}, \frac{2}{3}, \frac{5}{6}</math></p> <p><math>\frac{5}{12}, \frac{8}{12}, \frac{10}{12}</math></p>

# Calculation policy

# Fractions

<p>Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.</p>			
<p>Multiply simple pairs of proper fractions, writing the answer in its simplest form.</p>	<p><math>\frac{1}{2}</math> of <math>\frac{3}{4}</math></p> 	<p><math>\frac{1}{2}</math> of <math>\frac{3}{4}</math></p> 	$\frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$

<p>Recall and use equivalences between simple fractions, decimals and percentages including in different contexts.</p>		<p>Which would you prefer 75% or <math>\frac{3}{8}</math> of a pie?</p> <p>75%                      <math>\frac{3}{8}</math></p>	<p>John scored <math>\frac{40}{80}</math> in his spelling test and Hannah scored 40%. Who scored more?</p>
<p>Divide proper fractions by whole numbers.</p>		<p><math>\frac{1}{2} \div 3 = \frac{1}{6}</math></p>	<p><math>\frac{1}{2} \div 3</math></p> <p><math>\frac{1}{2} \div 3 = \frac{1}{6}</math></p> <p>2 x 3</p>

<p>Associate fractions with division and calculate decimal fraction equivalents.</p>		<p>3 slices of pie 'out of' 8</p> 	<p><math>\frac{3}{8}</math></p> <p>3 'out of' 8 is the same as 3 'divided by' 8</p> <p><b><math>3 \div 8 = 0.375</math></b></p> <p>So <b><math>\frac{3}{8} = 0.375</math></b></p>
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