



# St John Fisher RC Primary School

## Year 6 Maths Knowledge Organiser

### Spring One - Block 1 – Ratio (1)

Objectives	Teacher
<ul style="list-style-type: none"><li>I can solve problems that involve relative sizes of two things where the missing number can be found by multiplying or dividing by whole numbers.</li></ul>	
<b>Ratio &amp; Proportion</b>	
<p>The relationship between 2 and 8 can be described as <u>additive</u> or <u>multiplicative</u>.</p> <p><math>2 + 6 = 8</math>      <math>2 \times 4 = 8</math></p> <p><math>2 - 6 = 8</math>      <math>2 \div 4 = 8</math></p> <p><b>The ratio symbol</b></p>  <p>The ratio of apples to bananas: 1:2</p> <p>The ratio of bananas to oranges: 2:3</p> <p>The ratio of apples to bananas to oranges: 1:2:3</p> <p>The ratio of oranges to bananas to apples: 3:2:1</p>	<p><b>Ratio Language</b></p> <p>For every 1 circle, there are 2 triangles.</p>  <p>For every 2 bananas, there are 3 apples.</p>  <p>For every 1 football, there are 3 rugby balls.</p> 
<b>Key Vocabulary</b>	
<b>Ratio</b>	The relationship in quantity, amount, or size between two or more things.
<b>Proportion</b>	A part, share or number of a whole amount.
<b>Part</b>	An amount or section of a whole.
<b>Whole</b>	All of something.
<b>Additive</b>	Something produced by adding.
<b>Multiplicative</b>	Something produced by multiplying.
<b>Sentence Stems</b>	
$\underline{\quad} \times \underline{\quad} = \underline{\quad}$ and $\underline{\quad} + \underline{\quad} = \underline{\quad}$	The ratio of $\underline{\quad}$ to $\underline{\quad}$ is $\underline{\quad} : \underline{\quad}$
$\underline{\quad}$ is $\underline{\quad}$ times the size of $\underline{\quad}$	For every $\underline{\quad}$ , there are $\underline{\quad}$
<b>Assessment</b>	



# St John Fisher RC Primary School

## Year 6 Maths Knowledge Organiser

### Spring One- Block 1 – Ratio (2)

Objectives	Teacher
<ul style="list-style-type: none"> <li>I can solve problems involving unequal sharing and grouping. I can use my knowledge of fractions and multiples to do this.</li> </ul>	
<ul style="list-style-type: none"> <li>I can solve problems involving shapes where the scale factor is known or can be found.</li> </ul>	

Ratio & Proportion	
<p><b>Ratio and problem solving</b></p> <p><b>Ingredients for Fruit Smoothie (serves 10 people)</b></p> <ul style="list-style-type: none"> <li>800g of bananas</li> <li>500g of strawberries</li> <li>200g of raspberries</li> <li>700ml of milk</li> <li>300ml of natural yogurt</li> </ul> <p>To use the ingredients for 1 person, you divide all the quantities by 10 (<math>\div 10</math>).</p> <p>To use the ingredients for 5 people, you halve all the quantities (<math>\div 2</math>).</p> <p>To use the ingredients for 20 people, you double all the quantities (<math>\times 2</math>).</p> <p>In a bag of 15 sweets, there is 1 smiley face sweet for every 4 love heart sweets. Therefore, there will be 3 smiley face sweets and 12 love heart sweets in the bag.</p> <p>Therefore, there will be 3 smiley face sweets and 12 love heart sweets in the bag.</p>	<p><b>Scale Factors</b></p> <p>Shape A has been enlarged by a scale factor of 2 to make Shape B.</p> <p>Shape B is now two times as big as Shape A.</p> <p>Shape B has been enlarged from Shape A by a scale factor of 3.</p> <p>Shape B is now three times as big as Shape A.</p>

Key Vocabulary	
<b>Ratio</b>	The relationship in quantity, amount, or size between two or more things.
<b>Proportion</b>	A part, share or number of a whole amount.
<b>Part</b>	An amount or section of a whole.
<b>Whole</b>	All of something.
<b>Scale Factor</b>	The amount by which something has been enlarged (made bigger).
<b>Enlargement</b>	To make something bigger.

Sentence Stems	
<p>The ratio of _____ to _____ is _____ : _____</p> <p>There are _____ parts altogether.</p> <p>The fraction that is _____ is _____</p>	<p>_____ squares represents _____, so each square represents _____</p> <p>The shape is _____ times as big, so the scale factor of the enlargement is _____</p>

Assessment
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