



# 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>	

#### Ratio & Proportion

<p>The relationship between 2 and 8 can be described as <u>additive</u> or <u>multiplicative</u>.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <math>+6</math>  <math>2 \rightarrow 8</math>  <math>-6</math> </div> <div style="border: 1px solid black; padding: 5px; background-color: #d9ead3;">             8 is 6 more than 2              2 is 6 less than 8           </div> <div style="text-align: center;"> <math>\times 4</math>  <math>2 \rightarrow 8</math>  <math>\div 4</math> </div> <div style="border: 1px solid black; padding: 5px; background-color: #d9ead3;">             8 is four times the size of 2              2 is a quarter the size of 8           </div> </div>	<p><u>Ratio Language</u></p> <p>For every 1 circle, there are 2 triangles.</p> <div style="text-align: center;"> </div> <p>For every 2 bananas, there are 3 apples.</p> <div style="text-align: center;"> </div> <p>For every 1 football, there are 3 rugby balls.</p> <div style="text-align: center;"> </div>
<p><u>The ratio symbol</u></p> <div style="text-align: center;"> </div> <p>The ratio of apples to bananas: 1:2          The ratio of bananas to oranges: 2:3          The ratio of apples to bananas to oranges: 1:2:3          The ratio of oranges to bananas to apples: 3:2:1</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>Additive</b>	Something produced by adding.
<b>Multiplicative</b>	Something produced by multiplying.

#### Sentence Stems

_____ x _____ = _____ and _____ + _____ = _____	The ratio of _____ to _____ is _____ : _____
_____ is _____ times the size of _____	For every _____, there are _____

#### Assessment



# 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>	

#### Ration & Proportion

##### Ratio and problem solving

**Ingredients for Fruit Smoothie** (serves 10 people)

- 800g of bananas
- 500g of strawberries
- 200g of raspberries
- 700ml of milk
- 300ml of natural yogurt

To use the ingredients for 1 person, you divide all the quantities by 10 ( $\div 10$ ).

To use the ingredients for 5 people, you halve all the quantities ( $\div 2$ ).

To use the ingredients for 20 people, you double all the quantities ( $\times 2$ ).

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.

##### Scale Factors

Shape A has been enlarged by a scale factor of 2 to make Shape B.

Shape B is now two times as big as Shape A.

Shape B has been enlarged from Shape A by a scale factor of 3.

Shape B is now three times as big as Shape A.

#### 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 be enlarged (made bigger).
<b>Enlargement</b>	To make something bigger.

#### Sentence Stems

The ratio of ____ to ____ is ____ : ____ There are ____ parts altogether. The fraction that is ____ is ____	____ squares represents ____, so each square represents ____
	The shape is ____ times as big, so the scale factor of the enlargement is ____

#### Assessment