



# St John Fisher RC Primary School

## Year 6 Maths Knowledge Organiser

### Spring One - Block 3 – Decimals (1)

Objectives		Teacher																																														
<ul style="list-style-type: none"> <li>I can identify the value of each digit up to 3 decimal places.</li> </ul>																																																
<ul style="list-style-type: none"> <li>I can solve problems by using rounding to a specified degree of accuracy.</li> </ul>																																																
<ul style="list-style-type: none"> <li>I can solve addition and subtraction multi-step problems.</li> </ul>																																																
Decimals & Place Value																																																
<p><b>Place Value</b></p>	<table border="1"> <thead> <tr> <th>Tens</th> <th>Ones</th> <th>tenths</th> <th>hundredths</th> <th>thousandths</th> </tr> </thead> <tbody> <tr> <td></td> <td>1 1 1</td> <td>0.1 0.1 0.1 0.1</td> <td>0.01 0.01</td> <td>0.001 0.001 0.001 0.001</td> </tr> </tbody> </table> <p><math>3 + \frac{4}{10} + \frac{2}{100} + \frac{6}{1000} \longleftrightarrow 3.426 \longleftrightarrow 3 + 0.4 + 0.02 + 0.006</math></p> <table border="1"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr> <tr> <td>0.1</td><td>0.2</td><td>0.3</td><td>0.4</td><td>0.5</td><td>0.6</td><td>0.7</td><td>0.8</td><td>0.9</td></tr> <tr> <td>0.01</td><td>0.02</td><td>0.03</td><td>0.04</td><td>0.05</td><td>0.06</td><td>0.07</td><td>0.08</td><td>0.09</td></tr> <tr> <td>0.001</td><td>0.002</td><td>0.003</td><td>0.004</td><td>0.005</td><td>0.006</td><td>0.007</td><td>0.008</td><td>0.009</td></tr> </table>	Tens	Ones	tenths	hundredths	thousandths		1 1 1	0.1 0.1 0.1 0.1	0.01 0.01	0.001 0.001 0.001 0.001	1	2	3	4	5	6	7	8	9	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	
Tens	Ones	tenths	hundredths	thousandths																																												
	1 1 1	0.1 0.1 0.1 0.1	0.01 0.01	0.001 0.001 0.001 0.001																																												
1	2	3	4	5	6	7	8	9																																								
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9																																								
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09																																								
0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009																																								
Key Vocabulary																																																
<b>Decimal Place</b>	The position of a digit to the right of the decimal place.																																															
<b>tenth</b>	Each of ten equal parts of a whole amount. Equal to 1 decimal place.																																															
<b>hundredth</b>	Each of one hundred equal parts of a whole amount. Equal to 2 decimal places.																																															
<b>thousandth</b>	Each of one thousand equal parts of a whole amount. Equal to 3 decimal places.																																															
<b>Rounding</b>	To round an amount to the nearest specified amount (e.g. rounding a decimal to the nearest whole number).																																															
<b>Addition</b>	The process of combining amounts to find a sum. Addend + Addend = Sum																																															
<b>Subtraction</b>	The process of removing one amount from another. Subtrahend – Minuend = Difference																																															
Sentence Stems																																																
There are _____ tenths, _____ hundredths and _____ thousandths	So _____ rounded to the nearest _____ is _____																																															
There are _____ in _____	_____ added to _____ is equal to _____																																															
Assessment																																																



# St John Fisher RC Primary School

## Year 6 Maths Knowledge Organiser

### Spring One - Block 3 – Decimals (2)

Objectives	Teacher
• I can multiply and divide numbers by 10, 100 and 1000 giving answers up to 3 decimal places.	
• I can multiply a 1-digit number with up to 2 decimal places by whole numbers.	
• I can use division where the answer has up to 2 decimal places.	
• I can solve problems using addition, subtraction, multiplication and division.	

### Decimals

Multiplying & Dividing by 10, 100 and 1,000	Multiplying & Dividing																																																																																				
<table border="1"> <thead> <tr> <th>Thousands</th><th>Hundreds</th><th>Tens</th><th>Ones</th><th>tenths</th><th>hundredths</th><th>thousandths</th></tr> </thead> <tbody> <tr> <td></td><td></td><td></td><td>2</td><td>0</td><td>8</td><td></td></tr> <tr> <td></td><td></td><td>2</td><td>0</td><td>8</td><td></td><td></td></tr> <tr> <td></td><td></td><td></td><td>2</td><td>0</td><td>8</td><td></td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Thousands</th><th>Hundreds</th><th>Tens</th><th>Ones</th><th>tenths</th><th>hundredths</th><th>thousandths</th></tr> </thead> <tbody> <tr> <td></td><td></td><td></td><td>4</td><td>3</td><td>5</td><td></td></tr> <tr> <td>4</td><td>3</td><td>5</td><td>0</td><td></td><td></td><td></td></tr> <tr> <td></td><td></td><td>4</td><td>3</td><td>5</td><td></td><td></td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Thousands</th><th>Hundreds</th><th>Tens</th><th>Ones</th><th>tenths</th><th>hundredths</th><th>thousandths</th></tr> </thead> <tbody> <tr> <td>1</td><td>3</td><td>5</td><td>1</td><td>3</td><td>5</td><td>1</td></tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>	Thousands	Hundreds	Tens	Ones	tenths	hundredths	thousandths				2	0	8				2	0	8						2	0	8		Thousands	Hundreds	Tens	Ones	tenths	hundredths	thousandths				4	3	5		4	3	5	0						4	3	5			Thousands	Hundreds	Tens	Ones	tenths	hundredths	thousandths	1	3	5	1	3	5	1															<b>M9d: Column Multiplication</b>  <b>M9e: Column Multiplication</b> 
Thousands	Hundreds	Tens	Ones	tenths	hundredths	thousandths																																																																															
			2	0	8																																																																																
		2	0	8																																																																																	
			2	0	8																																																																																
Thousands	Hundreds	Tens	Ones	tenths	hundredths	thousandths																																																																															
			4	3	5																																																																																
4	3	5	0																																																																																		
		4	3	5																																																																																	
Thousands	Hundreds	Tens	Ones	tenths	hundredths	thousandths																																																																															
1	3	5	1	3	5	1																																																																															
<table border="1"> <thead> <tr> <th>Thousands</th><th>Hundreds</th><th>Tens</th><th>Ones</th><th>tenths</th><th>hundredths</th><th>thousandths</th></tr> </thead> <tbody> <tr> <td>1</td><td>3</td><td>5</td><td>1</td><td>3</td><td>5</td><td>1</td></tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>	Thousands	Hundreds	Tens	Ones	tenths	hundredths	thousandths	1	3	5	1	3	5	1															<table border="1"> <thead> <tr> <th>Thousands</th><th>Hundreds</th><th>Tens</th><th>Ones</th><th>tenths</th><th>hundredths</th><th>thousandths</th></tr> </thead> <tbody> <tr> <td>2</td><td>2</td><td>4</td><td>3</td><td>3</td><td>3</td><td>3</td></tr> <tr> <td></td><td></td><td></td><td>4</td><td>5</td><td>1</td><td>3</td></tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>	Thousands	Hundreds	Tens	Ones	tenths	hundredths	thousandths	2	2	4	3	3	3	3				4	5	1	3																																			
Thousands	Hundreds	Tens	Ones	tenths	hundredths	thousandths																																																																															
1	3	5	1	3	5	1																																																																															
Thousands	Hundreds	Tens	Ones	tenths	hundredths	thousandths																																																																															
2	2	4	3	3	3	3																																																																															
			4	5	1	3																																																																															

### Key Vocabulary

Decimal Place	The position of a digit to the right of the decimal place.
tenth	Each of ten equal parts of a whole amount. Equal to 1 decimal place.
hundredth	Each of one hundred equal parts of a whole amount. Equal to 2 decimal places.
thousandth	Each of one thousand equal parts of a whole amount. Equal to 3 decimal places.
Rounding	To round an amount to the nearest specified amount (e.g. rounding a decimal to the nearest whole number).
Multiplication	The process of combining amounts to find a product. Multiplicand x Multiplier = Product.
Division	The process of sharing an amount into equal parts. Dividend ÷ Divisor = Quotient.
Operation	The processes of addition, subtraction, multiplication and division.

### Sentence Stems

_____ is 10/100/1,000 times the size of _____	To multiply by _____, I move the digits _____ to the _____
To divide by _____, I move the digits _____ to the _____	_____ multiplied/divided by _____ is _____

### Assessment