

Year 6 Decimals Knowledge Organiser.

Decimals	Place Value					Fractions to Decimals																																																											
Key Vocabulary	Place Value					Fractions to Decimals																																																											
decimal place	<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <th style="width: 15%;">Tens</th> <th style="width: 15%;">Ones</th> <th style="width: 15%;">tenths</th> <th style="width: 15%;">hundredths</th> <th style="width: 15%;">thousandths</th> </tr> <tr> <td></td> <td style="text-align: center;">● ● ●</td> <td style="text-align: center;">● ● ● ●</td> <td style="text-align: center;">● ●</td> <td style="text-align: center;">● ● ● ● ● ●</td> </tr> </table> <div style="text-align: center;"> $3 + \frac{4}{10} + \frac{2}{100} + \frac{6}{1000} \longleftrightarrow 3.426 \longleftrightarrow 3 + 0.4 + 0.02 + 0.006$ </div> <table border="1" style="margin: auto; border-collapse: collapse; text-align: center;"> <tr><td>1</td><td>2</td><td style="background-color: #4CAF50; color: white;">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 style="background-color: #4CAF50; color: white;">0.3</td><td style="background-color: #4CAF50; color: white;">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 style="background-color: #4CAF50; color: white;">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 style="background-color: #4CAF50; color: white;">0.006</td><td>0.007</td><td>0.008</td><td>0.009</td></tr> </table>					Tens	Ones	tenths	hundredths	thousandths		● ● ●	● ● ● ●	● ●	● ● ● ● ● ●	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	$\frac{7}{20} = \frac{35}{100}$ or 0.35 $\frac{7}{25} = \frac{28}{100}$ or 0.28 $\frac{7}{50} = \frac{14}{100}$ or 0.14 $\frac{8}{200} = \frac{4}{100}$ or 0.04 When the denominator is not a factor or multiple of 100 $\frac{7}{8} = 7 \div 8$ <table border="1" style="margin: auto; border-collapse: collapse; text-align: center;"> <tr><td></td><td>0</td><td>8</td><td>7</td><td>5</td></tr> <tr><td>8</td><td>7</td><td>0</td><td>6</td><td>4</td></tr> </table>					0	8	7	5	8	7	0	6	4
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Decimals

Knowledge Organiser

Multiplying and Dividing by 10, 100 and 1000

Thousands	Hundreds	Tens	Ones	tenths	hundredths	thousandths
			2	0	8	
		← × 10	2	0	8	
			2	0	8	
			2	0	8	
			2	0	8	
			2	0	8	

Thousands	Hundreds	Tens	Ones	tenths	hundredths	thousandths
		4	3	5		
	← × 100	4	3	5		
4	3	5	0			
			4	3	5	
			4	3	5	
			4	3	5	

Thousands	Hundreds	Tens	Ones	tenths	hundredths	thousandths
			1	3	5	1
	← × 1000		1	3	5	1
1	3	5	1			
			1	3	5	1
			1	3	5	1
			1	3	5	1

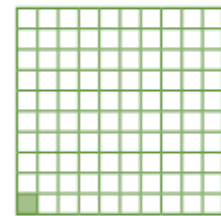
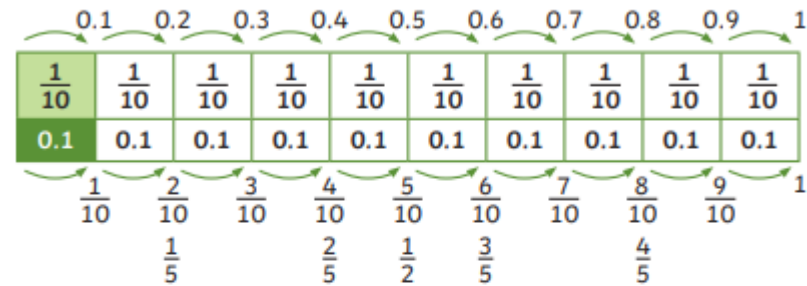
Multiplying Decimals by Integers

	3	4	5
×			3
1	0	3	5
	1	1	

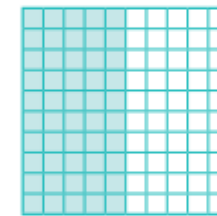
$$3.21 \times 3 = 9.63$$

Ones	tenths	hundredths
1 1 1	0.1 0.1	0.01
1 1 1	0.1 0.1	0.01
1 1 1	0.1 0.1	0.01

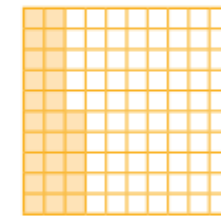
Decimal Numbers as Fractions



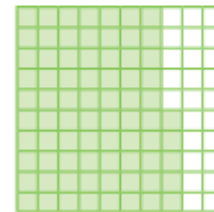
$$\frac{1}{100} = 0.01$$



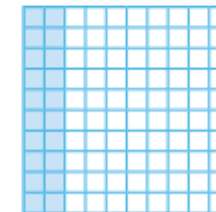
$$\frac{50}{100} = \frac{1}{2} = 0.5$$



$$\frac{25}{100} = \frac{1}{4} = 0.25$$



$$\frac{75}{100} = \frac{3}{4} = 0.75$$



$$\frac{20}{100} = \frac{1}{5} = 0.2$$

$$\frac{1}{3} = 0.33$$

$$\frac{1}{8} = 0.125$$

$$\frac{1}{1000} = 0.001$$