

## Unit 16 - BIDMAS

No.	Question	Answer
16.1	What does BIDMAS mean?	The order in which we do operations
16.2	What does B represent?	Brackets
16.3	What does I represent?	Indices
16.4	What does D represent?	Division
16.5	What does M represent?	Multiplication
16.6	What does A represent?	Addition
16.7	What does S represent?	Subtraction
16.8	What does index mean? (plural indices)	How many times to use the number in a multiplication
16.9	What is $3^2$ ?	$3 \times 3 = 9$
16.10	What is $3^3$ ?	$3 \times 3 \times 3 = 27$
16.11	What is $3^4$ ?	$3 \times 3 \times 3 \times 3 = 81$
16.12	What is $p^2$ ?	$p \times p$
16.13	What is $t^3$ ?	$t \times t \times t$

## Unit 17 – introduction to algebra

No.	Question	Answer	Example
17.1	What is a sequence?	A list of numbers following a pattern	3, 7, 11, 15...
17.2	What is the common difference?	The difference between any two consecutive terms in a linear sequence	3, 7, 11, 15... The common difference is 4
17.1	What does $7y$ mean?	$7 \times y$	
17.2	What does $ab$ mean?	$a \times b$	
17.3	What does $3uv$ mean?	$3 \times u \times v$	
17.4	What does $\frac{x}{4}$ mean?	$x \div 4$	
17.5	What is a term?	The separate parts of an expression	7, a, 2a, $a^2$
17.6	What is an unknown?	An unknown number represented by a letter	a, b, x, y
17.7	What are like terms?	Like terms have "same letter, same index"	3p, 9p, -5p $4x^2$ , $12x^2$ , $-x^2$
17.8	What is an expression?	A mixture of numbers and letters (no equals sign)	$7a + b - 3c$
17.9	What is an equation?	Two things are equal to one another (equal sign and two 'sides')	$7a + 1 = 8$
17.10	What is a coefficient?	The number in front of the variable	$3x$ (3 is the coefficient of x)
17.11	What does substitute mean?	Replace the letters with the numbers	$a = 3, b = 5, c = 2$ So... $a + b + c$  is... $3 + 5 + 2 = 10$
17.12	What does expand mean?	Multiply the coefficient outside the brackets with each term inside the brackets	$4(3 + x) = 12 + 4x$
17.13	What does factorise mean?	Find the common factor of all the terms and divide so that it is outside the bracket	$12 + 4x = 4(3 + x)$

Date (week commencing)	Numbers to learn
22 <sup>nd</sup> Apr	16.1 – 16.13
29 <sup>th</sup> Apr	16.1 – 16.13
6 <sup>th</sup> May	17.1 – 17.7
13 <sup>th</sup> May	17.8 – 17.13
20 <sup>th</sup> May	16.1 – 17.13

## Unit 18 – pie charts

No.	Question	Answer	Example																
18.1	What does qualitative mean?	Data that describes something	Hair colour																
18.2	What does quantitative mean?	Data that can be measured or counted	Number of dogs in the park																
18.3	What is discrete data?	Data that can only take set values	Shoe size Number of pets you have																
18.4	What is continuous data?	Data that can take any value (can be decimal)	Height Weight																
18.5	What is primary data?	Data that is collected first hand	Taking a survey																
18.6	What is secondary data?	Data that is collected by someone else	The internet																
18.7	What is a sample?	A smaller group taken from the total population you are testing	In year 8 there are 200 students, I took a sample of 40 to give my survey.																
18.8	What is a tally chart?	A way of collecting data	<table border="1"> <thead> <tr> <th>Colour</th> <th>Tally</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>Red</td> <td>III</td> <td>3</td> </tr> <tr> <td>Blue</td> <td>II</td> <td>2</td> </tr> <tr> <td>Green</td> <td>IIII</td> <td>4</td> </tr> </tbody> </table>	Colour	Tally	Frequency	Red	III	3	Blue	II	2	Green	IIII	4				
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Red	III	3																	
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Green	IIII	4																	
18.9	What are three things that tally charts should include?	<ul style="list-style-type: none"> <li>The specific category</li> <li>Tally</li> <li>Frequency</li> </ul>																	
18.10	What is a two way table?	Used to represent two sets of data in one table	<table border="1"> <thead> <tr> <th></th> <th>Girls</th> <th>Boys</th> <th>Total</th> </tr> </thead> <tbody> <tr> <th>Yr 7</th> <td>4</td> <td>3</td> <td>7</td> </tr> <tr> <th>Yr 8</th> <td>6</td> <td>2</td> <td>8</td> </tr> <tr> <th>Total</th> <td>10</td> <td>5</td> <td>15</td> </tr> </tbody> </table>		Girls	Boys	Total	Yr 7	4	3	7	Yr 8	6	2	8	Total	10	5	15
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18.11	What are three things that two way tables must include?	<ul style="list-style-type: none"> <li>One data set along the top row</li> <li>One data set along the left column</li> <li>2 total headings</li> </ul>																	
18.12	What is a pictogram?	A chart that uses pictures to represent data																	
18.13	What three things must a pictogram include?	<ul style="list-style-type: none"> <li>A heading column</li> <li>A sensible picture</li> <li>A key</li> </ul>																	
18.14	What is a bar chart?	A way of representing data where the height of each bar represents the frequency																	
18.15	What four things must a bar chart have?	<ul style="list-style-type: none"> <li>An x-axis representing frequency</li> <li>A y-axis representing the groups</li> <li>The bars must be the same width</li> <li>The axis must go up in equal increments</li> </ul>																	
18.16	What is a composite bar chart?	A type of bar chart which can represent multiple pieces of data by splitting the bars into sections																	
18.17	What is a pie chart?	A way of representing data in a circle out of 360°																	
18.18	How do you calculate each angle in a pie chart?	Divide by the total frequency and multiply by 360																	

## Unit 19 - %s

No.	Percentage	Fraction	Decimal
19.1	25%	$\frac{1}{4}$	0.25
19.2	50%	$\frac{1}{2}$	0.5
19.3	75%	$\frac{3}{4}$	0.75
19.4	12.5%	$\frac{1}{8}$	0.125
19.5	20%	$\frac{1}{5}$	0.2
19.6	33. $\dot{3}$	$\frac{1}{3}$	0. $\dot{3}$
19.7	66. $\dot{6}$	$\frac{2}{3}$	0. $\dot{6}$
19.8	10%	$\frac{1}{10}$	0.1
19.9	20%	$\frac{2}{10} = \left(\frac{1}{5}\right)$	0.2
19.10	30%	$\frac{3}{10}$	0.3
19.11	40%	$\frac{4}{10} = \left(\frac{2}{5}\right)$	0.4
19.12	50%	$\frac{5}{10}$	0.5
19.13	60%	$\frac{6}{10} = \left(\frac{3}{5}\right)$	0.6
19.14	70%	$\frac{7}{10}$	0.7
19.15	80%	$\frac{8}{10} = \left(\frac{4}{5}\right)$	0.8
19.16	90%	$\frac{9}{10}$	0.9
19.17	100%	1 whole	1

## Unit 19 - %s (cont.)

No.	Question	Answer	
19.18	How do you find 1% of an amount?	Divide by 100	1% of 70. $70 \div 100 = 0.7$
19.19	How do you find 10% of an amount?	Divide by 10	10% of 70. $70 \div 10 = 7$
19.20	How do you find 50% of an amount?	Divide by 2	50% of 70. $70 \div 2 = 35$
19.21	How do you find 25% of an amount?	Divide by 4	25% of 70. $70 \div 4 = 17.5$
19.22	How do you express a quantity as a percentage of another?	<ol style="list-style-type: none"> <li>Represent the quantities as a fraction</li> <li>Convert the fraction to decimal</li> </ol>	I score 7 out of 25 on a test $\frac{7}{25} = \frac{28}{100} = 28\%$
19.23	How do you compare and order FDP?	Convert them all to be written in the same representation.	20% or $\frac{2}{5}$ ? $20\% = \frac{2}{10} = \frac{1}{5}$ $\frac{2}{5} > 20\%$
19.24	How do you increase by a %?	<ol style="list-style-type: none"> <li>Find the percentage</li> <li>Add it on</li> </ol>	Increase £50 by 20% $20\% = £10$ $£50 + £10 = £60$
19.25	How do you decrease by a %?	<ol style="list-style-type: none"> <li>Find the percentage</li> <li>Take it away</li> </ol>	Decrease £50 by 20% $20\% = £10$ $£50 - £10 = £40$

Date (week commencing)	Numbers to learn
3 <sup>rd</sup> Jun	18.1 – 18.7
10 <sup>th</sup> Jun	18.1 – 18.17
17 <sup>th</sup> Jun	18.17 – 19.17
24 <sup>th</sup> Jun	19.1 – 19.17
1 <sup>st</sup> Jul	19.18 – 19.25
8 <sup>th</sup> Jul	19.18 – 19.25