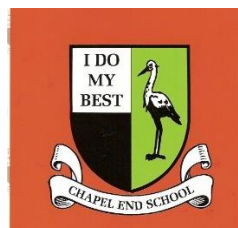


Mathematical Vocabulary

Year 6



Mathematics vocabulary list Year 6

Maths is its own language. Sometimes that language looks like written word and sometimes it looks like symbols, but it is a language and it must be learned for math fluency and competency. If a child does not have a good understanding of key mathematical vocabulary, it can hinder them in making good progress in maths and in other areas of the curriculum.



At Chapel End, we explicitly teach maths vocabulary, giving it a context and allowing children to apply it in a variety of problems.

Listed below are the key mathematical terms a child in Year 6 will learn this year. This is the minimum we expect children to learn; however, we know children are curious and will undoubtedly want to learn more and we encourage this.

<u>Vocabulary</u>	<u>Definition</u>	<u>Example</u>
Number and Place Value		
Brackets	The symbols () used to separate parts of a multi-step calculation.	' $(10 - 2) \times 3 = 24$ '
Equivalent expression	An expression, which can be algebraic, which is equal in value to another expression.	'Find an equivalent expression to $17 + 10$. $18 + 9$ is an equivalent expression to $17 + 10$.'
Order of operations	The internationally agreed order to complete operations in a multi-step equation with multiple operations.	' $(3 + 4) \times 2 =$ <i>The order of operations dictates that the operation within the brackets is completed first.</i>
<div style="text-align: center;"> Ordering Mathematical Operations </div>		
Addition and subtraction		
Multiplication and division		

Factorise	To identify factors of a given number. To express a number as factors.	'I can factorise 12 by looking at its factor pairs. $1 \times 12 = 12$, $2 \times 6 = 12$, $3 \times 4 = 12$. So the factors of 12 are 1, 2, 3, 4, 6 and 12.'
Prime factor	A factor that is a prime number. In other words: any of the prime numbers that can be multiplied to give the original number	'The prime factors of 15 are 3 and 5 (because $3 \times 5 = 15$, and 3 and 5 are prime numbers).'

Fractions, decimals, percentages


Ratio	A ratio shows the relative sizes of two or more values.	<p><i>Example:</i> There are 3 triangles and 2 squares.</p>  <p>We can write the ratio as</p> <p>3 : 2 or 3 to 2 or $\frac{3}{2}$</p>
Proportion	A comparison between two or more parts of a whole or group. Proportion expresses a part-whole relationship. This may be represented as a fraction, a percentage or a decimal.	<p>'Two thirds of a group of children were boys. The proportion of the group that is girls is one third.'</p> 

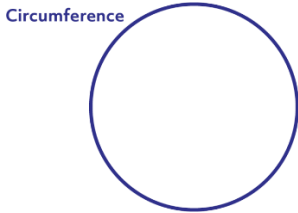
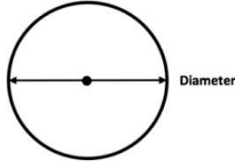
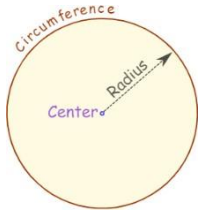
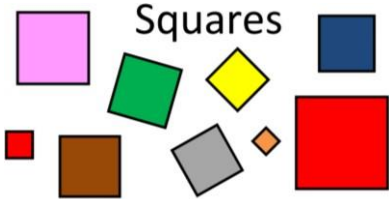
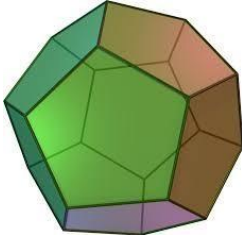
Algebra

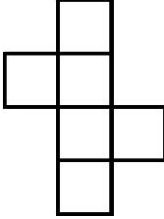
Equation	An equation says that two things are equal. It will have an equals "=" sign	<p>'That equation says: what is on the left ($7 + 2$) is equal to what is on the right ($10 - 1$)'</p> <p>$7 + 2 = 10 - 1$</p>
Formula	An algebraic expression of a rule.	<p>'The area of a rectangle can be found by multiplying the width and height. $a = w \times h$. This is the formula'.</p>
Unknown	A number we do not know.	<p>'In the equation below, y is unknown but can be calculated.</p> <p>$y + 17 = 100$'</p>

Length

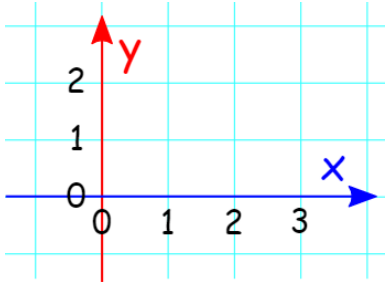
Feet/foot	An imperial unit of measure of length.	'I am approximately five feet tall.'
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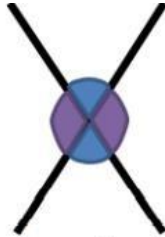
Mile	An imperial unit of measure of length.	'Five miles is equivalent to eight kilometres.'
Yard	A unit of length (or distance) equal to 3 feet or 36 inches.	'In football, the penalty spot is 12 yards from the goal line.'
Weight		
Ounce	An imperial unit of measure of mass.	'The new born baby had a mass of 6 pounds and 3 ounces '.
Tonne	A unit of mass equal to 1000 kilograms.	'A small car weighs about 1 tonne '.
Capacity and volume		
Centilitre	A metric unit of capacity, equal to one hundredth of a litre	'There are 500 centilitres in this beaker. It is about the same 5 litres'.
Gallon	An imperial unit of measure of volume/capacity.	'A gallon is approximately 4.5 litres.'
Temperature		
Time		
Money		
Loss	If the income is less than the expenses.	'Two days ago. Sam's Bakery received \$480, but expenses were \$520. $\$480 - \$520 = -\$40$, which is a \$40 loss '.
Profit	Income minus all expenses.	'Sam's Bakery received \$900 yesterday, but expenses such as wages, food and electricity came to \$650. So the profit was $\$900 - \$650 = \$250$ '.
2d shape		
Arc	A portion of the circumference of a circle	

Circumference	The perimeter/boundary of a circle.	
Compass	A tool for creating curved lines, arcs and circles.	'I can use a pair of compasses to draw a circle with a radius of 4 cm.'
Intersect	The point at which two (or more) lines meet is where they intersect.	'The x and y axes intersect at (0,0)'
Diameter	A line from one point of the circumference of a circle to another on the opposite side, which must pass through the centre of the circle.	
Radius	A line from one point of the circumference of a circle to the centre of the circle.	
Similar	Similar shapes are those which have the same internal angles and where the side lengths are in the same ratio or proportion. Enlarging a shape by a scale factor (for example by doubling all side lengths) creates a similar shape.	<p>'All squares are similar to one another.'</p> 
3d shape		
Dodecahedron	A polyhedron (a flat-sided solid object) with 12 Faces.	

Net	A group of 2-D shapes which, when folded and connected, forms a 3-D polyhedron.	<p>'The net of a cube is comprised of six connected squares.'</p> 
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Position and direction

Origin	The point at which axes in a coordinates grid cross; the point (0,0).	
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Vertically opposite angles	Angles which are positioned opposite to one another when two lines intersect.	 <p>The purple angles indicated are vertically opposite angles.</p>
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Statistics

Mean	<p>The Arithmetic Mean is the average of the numbers: a calculated "central" value of a set of numbers.</p> <p>To calculate it:</p> <ul style="list-style-type: none"> • add up all the numbers, • then divide by how many numbers there are. 	<p>'What is the mean of 2, 7 and 9?</p> <p>Add the numbers: $2 + 7 + 9 = 18$</p> <p>Divide by how many numbers (i.e. we added 3 numbers): $18 \div 3 = 6$</p> <p>So the mean is 6'.</p>
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<p>Pie chart</p>	<p>A representation of a set of data where each segment represents one group in proportion to the whole.</p>	<p style="text-align: center;"><i>Student Grades</i></p> <p>A pie chart titled "Student Grades" showing the distribution of grades. The chart is divided into four segments: a large blue segment for 'B' (12 students, 42.9%), a red segment for 'C' (10 students, 35.7%), a green segment for 'A' (4 students, 14.3%), and a small light blue segment for 'D' (2 students, 7.1%).</p>																												
<p>Statistics</p>	<p>The study of data: how to collect, analyse, summarise and present it.</p>	<table border="1" data-bbox="962 577 1066 824"> <thead> <tr> <th>Day</th> <th>Height</th> </tr> </thead> <tbody> <tr><td>12</td><td>6.5</td></tr> <tr><td>13</td><td>6.2</td></tr> <tr><td>14</td><td>6.6</td></tr> <tr><td>15</td><td>7.1</td></tr> <tr><td>16</td><td>7.2</td></tr> <tr><td>17</td><td>6.8</td></tr> <tr><td>18</td><td>6.2</td></tr> <tr><td>19</td><td>6.4</td></tr> <tr><td>20</td><td>7.3</td></tr> <tr><td>21</td><td>7.1</td></tr> <tr><td>22</td><td>6.3</td></tr> <tr><td>23</td><td>6.8</td></tr> <tr><td>24</td><td>6.4</td></tr> </tbody> </table> <p>A dot plot showing height data on a number line from 6 to 8. The data points are represented by orange dots. A pink arrow points from the data table to the dot plot. A blue box contains the following summary statistics: Average Height = 6.68, Minimum Height = 6.2, and Maximum Height = 7.3.</p>	Day	Height	12	6.5	13	6.2	14	6.6	15	7.1	16	7.2	17	6.8	18	6.2	19	6.4	20	7.3	21	7.1	22	6.3	23	6.8	24	6.4
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