

**Year 6 – Discrete Mathematical Knowledge**



<b>Autumn 1</b>	<b>Autumn 2</b>	<b>Spring 1</b>	<b>Spring 2</b>	<b>Summer 1</b>	<b>Summer 2</b>
<p>I know the <math>&lt; &gt; =</math> symbols so I can use to compare numbers in ascending and descending order.</p> <p>I know part, part, whole so I can identify in addition/subtraction calculations.</p> <p>I know number bonds to 10.</p> <p>I know number bonds to 100.</p> <p>I know number bonds to 1000.</p> <p>I know times table facts up to 12x12 so I can write multiples of a number.</p> <p>I know common factors are numbers shared by 2 or more numbers.</p> <p>I know common multiples are numbers shared by 2 or more numbers.</p> <p>I know a prime number has a factor of itself and 1 so I can identify prime numbers up to 100.</p> <p>I know squared numbers are a product of a number multiplied by itself so I can</p>	<p>I know how to divide a fraction by a common factor so I can simplify fractions.</p> <p>I know a fraction is a part of a whole.</p> <p>I know the numerator is the number of parts.</p> <p>I know the denominator is the number of equal parts that make the whole.</p> <p>I know an improper fraction is where the numerator is larger than the denominator.</p> <p>I know a mixed number is made of an integer and a proper fraction</p> <p>I know how to convert an improper fraction to a mixed number using multiplication.</p> <p>I know how to convert a mixed number to an improper fraction using division.</p> <p>I know equivalent fractions are equal.</p>	<p>I know the number bonds to 1 using tenths and hundredths.</p> <p>I know tenths are written as 0. _</p> <p>I know hundredths are written as 0. __</p> <p>I know thousandths are written as 0. ___</p> <p>I know the relationship when exchanging between columns e.g. 3 tenths is the same as 30 hundredths.</p> <p>I know to move digits to the left when multiplying.</p> <p>I know to use 0 to represent place value so I can complete long multiplication.</p> <p>I know there are 24 hours in a day.</p> <p>I know there are 60 minutes in 1 hour.</p> <p>I know there are 60 seconds in 1 minute.</p> <p>I know there are 365 days in 1 year.</p>	<p>I know that percent means out of 100.</p> <p>I know a fraction can be written as a decimal.</p> <p>I know capacity is the amount an object can contain.</p> <p>I know volume is the amount within the object.</p> <p>I know perimeter is the length all the way around a 2D shape.</p> <p>I know perimeter is calculated by adding all the lengths of the sides together.</p> <p>I know area is the amount of space taken up by a 2D shape.</p> <p>I know area is calculated by length multiplied by width.</p> <p>I know that a 'kilo' means a thousand.</p> <p>I know there are 1000 grams in a kilogram.</p> <p>I know milli means one thousand</p>	<p>I know a full turn is 360 degrees.</p> <p>I know half turn is 180 degrees.</p> <p>I know a quarter turn is a right angle and 90 degrees.</p> <p>I know the horizontal axis is the X axis.</p> <p>I know the vertical axis is the Y axis.</p> <p>I know height x width x length will calculate the volume.</p>	<p>Consolidation of all discrete mathematical knowledge taught in Year 6.</p>



<p>identify square numbers up to 100.</p> <p>I know a cubed number is a product of a number multiplied by itself twice, so I can identify cube numbers.</p> <p>I know the rule of BIDMAS (Brackets, indices, division, multiplication, addition, subtraction)</p> <p>I know roman numerals.</p> <p>I know parallel lines are lines that run alongside each other in pairs.</p> <p>I know perpendicular lines cross at 90 degrees.</p> <p>I know 2D shapes so I can describe their properties.</p> <p>I know the 3D shapes: triangular based pyramid, square based pyramid, pentagonal based pyramid, triangular prism, hexagonal prism, cone, sphere, hemisphere and octahedron so I can describe their properties.</p> <p>I know a polygon is is a flat two-dimensional shape with straight sides that is fully closed.</p>	<p>I know reflection is a mirror image of an object drawn over a line/axis.</p> <p>I know translation is the movement of an object.</p> <p>I know acute angles are smaller than 90 degrees.</p> <p>I know obtuse angles are between 90 and 180 degrees.</p> <p>I know a reflex angle is any angle larger than 180 degrees.</p> <p>I know an angle is a measure of turn measured in degrees.</p> <p>I know now that there are two right angles on a straight line.</p> <p>I know there are four right angles around a point.</p> <p>I know the interior angles in a triangle is 180 degrees.</p> <p>I know the interior angles in a quadrilateral is 360 degrees.</p>	<p>I know there are 52 weeks in 1 year.</p> <p>I know there are 7 days in 1 week.</p> <p>I know an analogue clock is 12 hour.</p> <p>I know a digital clock is 24 hour.</p>	<p>I know there are 1000mm in 1m.</p> <p>I know there are 1000ml in 1l.</p> <p>I know centi means 100.</p> <p>I know there are 100cm in 1m.</p>		
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<p>I know a regular polygon is has all sides and angles the same length.</p> <p>I know an irregular polygon has sides and angles of different length/measure.</p> <p>I know the 3 types of triangle isosceles, scale and equilateral.</p>	<p>I know that vertically opposite angles share a vertex and are equal</p> <p>I know the mean is the total sum of all numbers divided by the number of values in the set.</p> <p>I know the radius is the distance half way across the circle.</p> <p>I know the circumference is the distance around the edge of the circle.</p> <p>I know the diameter is the distance right across the middle of the circle.</p> <p>I know the diameter is twice the size of the radius.</p>				
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