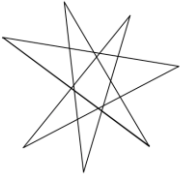
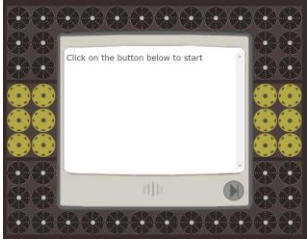
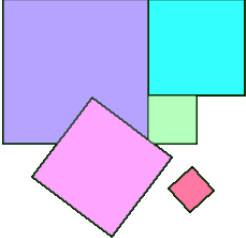









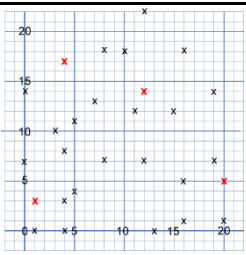
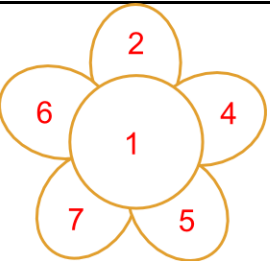
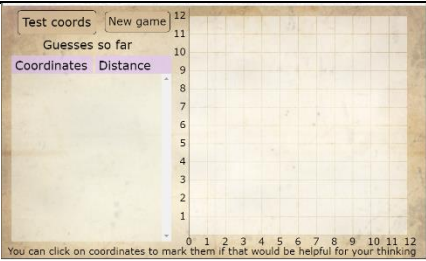
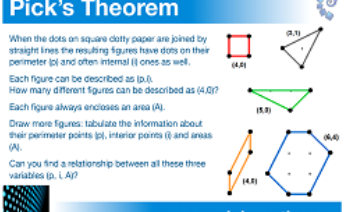
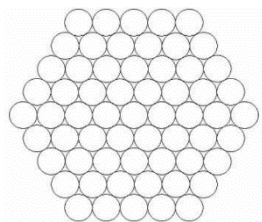
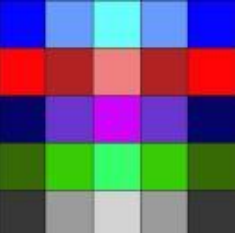

## More Able Students at TMWS

## Autumn term

Maths	Sept - Oct	Nov – Dec
YEAR 7	<p><b>TWO</b> + <b>TWO</b> <hr/><b>FOUR</b></p> <p><a href="https://nrich.maths.org/twoandtwo">https://nrich.maths.org/twoandtwo</a></p>	 <p><a href="https://nrich.maths.org/11456">https://nrich.maths.org/11456</a></p>
YEAR 8	<p><b>Thousands and Millions</b></p> <p><a href="https://nrich.maths.org/6046">https://nrich.maths.org/6046</a></p>	 <p><a href="https://nrich.maths.org/7216">https://nrich.maths.org/7216</a></p>
YEAR 9	 <p><a href="https://nrich.maths.org/7216">https://nrich.maths.org/7216</a></p>	 <p><a href="https://nrich.maths.org/8061">https://nrich.maths.org/8061</a></p>
YEAR 10	 <p><a href="https://nrich.maths.org/2664">https://nrich.maths.org/2664</a></p>	<p><math>20 = 6^2 - 4^2</math></p> <p><math>21 = 5^2 - 2^2</math></p> <p><math>36 = 6^2 - 0^2</math></p> <p><a href="https://nrich.maths.org/whatspossible">https://nrich.maths.org/whatspossible</a></p>
YEAR 11	 <p><a href="https://nrich.maths.org/693">https://nrich.maths.org/693</a></p>	 <p><a href="https://nrich.maths.org/7322">https://nrich.maths.org/7322</a></p>

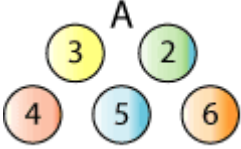


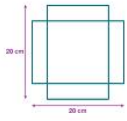
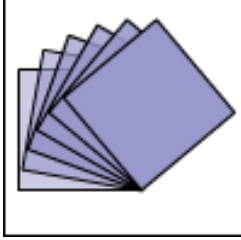
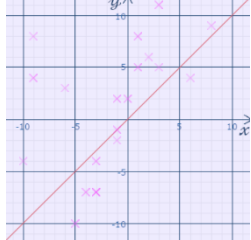
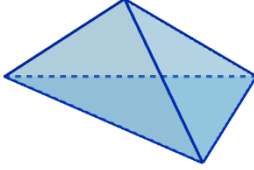

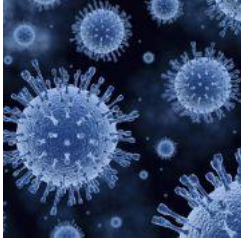
# More Able Students at TMWS

# Spring term

Maths	Jan – Feb	Feb – April
YEAR 7	<p><b>Got It!</b></p>  <p>This is a game for two players. Start with the target number of 23. The first player chooses a whole number from 1 to 4. Players take turns to add a whole number from 1 to 4 to the running total. The player who hits the target of 23 wins the game. Can you find a winning strategy? Can you always win? What happens if you choose a new target number? What happens if you change the range of numbers you can add? Can you work out a winning strategy for any target and any range of numbers?</p> <p>nrich.maths.org <a href="https://nrich.maths.org/397">https://nrich.maths.org/397</a></p>	<p><b>Consecutive Sums</b></p>  <p>Some numbers are sums of consecutive numbers. Can you make all the numbers this way? Which numbers can be written in more than one way?</p> <p><math>15 = 1 + 2 + 3 + 4</math>     <math>17 = 3 + 6 + 8</math>  <math>9 = 4 + 5</math> and <math>2 + 3 + 4</math>  <math>12 = 3 + 4 + 5</math>     <math>13 = 6 + 7</math>  <math>14 = 2 + 3 + 4 + 5</math></p> <p>nrich.maths.org <a href="https://nrich.maths.org/7999">https://nrich.maths.org/7999</a></p>
YEAR 8	<p><b>1 Step, 2 Step</b></p>  <p>Liam's house has a staircase with 12 steps. He can go down the steps one at a time or two at a time. For example, he could go down 1 step, then 1 step, then 2 steps, then 2, 2, 1, 1, 1, 1. In how many different ways can Liam go down the 12 steps, taking 1 or 2 steps at a time?</p> <p>nrich.maths.org <a href="https://nrich.maths.org/1step2step">https://nrich.maths.org/1step2step</a></p>	 <p><a href="https://nrich.maths.org/8485">https://nrich.maths.org/8485</a></p>
YEAR 9	 <p><a href="https://nrich.maths.org/786">https://nrich.maths.org/786</a></p>	 <p><a href="https://nrich.maths.org/6288">https://nrich.maths.org/6288</a></p>
YEAR 10	<p><b>Pick's Theorem</b></p>  <p>When the dots on square dotty paper are joined by straight lines the resulting figures have dots on their perimeter (p) and often internal (i) ones as well. Each figure can be described as (p, i). How many different figures can be described as (4, 0)? Each figure always encloses an area (A). Draw more figures. Tabulate the information about their perimeter points (p), interior points (i) and areas (A). Can you find a relationship between all these three variables (p, i, A)?</p> <p>nrich.maths.org <a href="https://nrich.maths.org/pickstheorem">https://nrich.maths.org/pickstheorem</a></p>	 <p><a href="https://nrich.maths.org/steeltcables">https://nrich.maths.org/steeltcables</a></p>
YEAR 11	 <p><a href="https://nrich.maths.org/900">https://nrich.maths.org/900</a></p>	<p><b>Nine Colours</b></p>  <p>You have 27 small cubes, 3 each of nine colours. Can you use all the small cubes to make a 3 by 3 by 3 cube so that each face of the bigger cube contains one of each colour?</p> <p>nrich.maths.org <a href="https://nrich.maths.org/ninecolours">https://nrich.maths.org/ninecolours</a></p>

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# Summer term

Maths	May-Jun	June- July
YEAR 7	 <p><a href="https://nrich.maths.org/oddsandevens">https://nrich.maths.org/oddsandevens</a></p>	 <p><a href="https://nrich.maths.org/85">https://nrich.maths.org/85</a></p>
YEAR 8	 <p><a href="https://nrich.maths.org/610">https://nrich.maths.org/610</a></p>	<p><b>Cuboid Challenge</b></p> <p>You can make an open box from a 20cm by 20cm piece of card by cutting out four squares and folding the flaps.</p> <p>What's the biggest volume of box you can make in this way?</p>  <p><a href="https://nrich.maths.org/cuboidchallenge">https://nrich.maths.org/cuboidchallenge</a></p>
YEAR 9	 <p><a href="https://nrich.maths.org/tiltedsquares">https://nrich.maths.org/tiltedsquares</a></p>	 <p><a href="https://nrich.maths.org/5725">https://nrich.maths.org/5725</a></p>
YEAR 10	 <p><a href="https://nrich.maths.org/272">https://nrich.maths.org/272</a></p>	<p><b>Marbles in a Box</b></p> <p>Imagine a three dimensional version of noughts and crosses where two players take it in turn to place different coloured marbles in a box.</p> <p>The box is made from 27 transparent unit cubes arranged in a 3-by-3 array.</p> <p>The object of the game is to complete as many winning lines of three marbles as possible.</p> <p>How many different ways can you make a winning line?</p>  <p><a href="https://nrich.maths.org/marbles">https://nrich.maths.org/marbles</a></p>
YEAR 11	 <p><a href="https://nrich.maths.org/epidemic">https://nrich.maths.org/epidemic</a></p>	