

Level 3 Core Maths

Please complete one line from the task box below. All students must complete the middle box.

<p>Use the exchange rate €1 = £0.74 to convert the following into pounds.</p> <p>a) €7664 b) €52153 c) €250,000</p> <p>Use the same exchange rate to convert the following into euros.</p> <p>a) £10000 b) £41865 c) £160,000</p>	<p>a) Find the nth term of the following sequence: 8, 16, 30, 50, 76</p> <p>a) What is the 100th term. b) What is the 250th term. c) Is 45270 in the sequence? If so which term is it.</p>	<p>Three bananas and two pears cost £2.07. Five bananas and three pears cost £3.33. Find the cost of ten bananas and ten pears.</p>
<p>Seven judges scored a joke out of 10. The scores have been arranged in order, from lowest to highest. Some of the scores are below.</p> <p>1.1 <input type="text"/> 1.8 <input type="text"/> 2.7 5.1 6.5</p> <p>The median score is half the interquartile range. The interquartile range is two thirds of the range. Find the two missing numbers.</p>	<p>Give a definition of the following:</p> <p>a) income tax b) mortgage c) interest d) correlation e) variance f) standard deviation</p>	<p>Calculate the difference between the 30th term and 60th term of the sequence: 8, 3, -2, -7, ..., ...</p>
<p>Find the nth term of the following sequence.</p> <p>$\frac{1}{2}, \frac{3}{4}, \frac{5}{6}, \frac{7}{8}, \dots$</p>	<p>Solve</p> $5x - y = 5$ $2y - x^2 = 11$ <p>You must show your working. (Do not use trial and improvement)</p>	<p>Five integers have: a mode of 1 a median of 2 a mean of 3</p> <p>What is the greatest possible range of the five integers? You must show your working.</p>

Useful resources/websites

- <https://www.tlmaths.com/home>
- <https://www.physicsandmathstutor.com/maths-revision/>
- <https://undergroundmathematics.org/>

Suggested books/reading list

- Alex's Adventures in Numberland
- Maths in Minutes: 200 Key Concepts Explained in an Instant
- How Not to Be Wrong: The Hidden Maths of Everyday Life
- The Ultimate Mathematical Challenge
- Does God Play Dice?