

# **Tips for Students Preparing for the Junior or Leaving Cert Maths Exams 2017**

At this stage you should have completed your mock examinations in Maths. You may or may not be happy with your result but I would ask you to try not to be too hard on yourself in relation to them as you still have plenty of time to Improve. Please keep in mind that you have had little exposure to Exam Style questions, have not completed the full course and have not done that length of exam paper up to now. For those of you who may have Dyslexia, I would like you to view your exams as a challenge, not a threat. Thousands of students gone before you have achieved their wildest dreams so aim high and keep believing in yourself. I would advise you to put a plan in place now so that you can study efficiently and prepare properly for your exams. Here is my top twelve tips to Ace your Maths Exams in June – both in preparation along the way and facing the paper on the day.

1. Do out a study timetable for your Easter holidays and beyond. Make sure there is loads of variety, different subjects and plenty of breaks/rewards on it.
2. Buy a small notes book and enter all the keynotes, new information you learn and formulae's that are not in your log tables into it. Divide the book into topics so that you can quick reference it easy.
3. Make a note of all new words you learn in class each day. If you don't fully understand the meaning of them, ask your teacher or google them. Write down their meaning in your own words when you find out.
4. Practice as many past exams questions as you can to get used to the wording, layout, style and marking scheme of them.
5. "Homework is study", so approach all Maths homework as you would an exam hall question.
6. Practice questions at home. Time yourself on each question to get used to Exam hall pressure. Stick to the timing for each question i.e. You have twenty five minutes to complete a fifty mark question (divide by two in Leaving Certificate Maths)
7. Get a "study buddy" that will do past exam questions for you and with you. You can meet up and share your Information with them. This can be useful in all subjects
8. On the day of the exam, read the wordy questions three or four times and then read them line by line, underlining the key word(s) in each line.

9. Prepare for all exams the night before by checking you have all the materials you need for a particular exam. Double check your timetable for the next day.
10. Don't be afraid to express yourself in simple English if you don't know what Maths will help you arrive at the solution. The State Exams Commission encourages creativity.
11. Buy yourself an Exam Paper Solutions Book. You can use this book to check the work you are doing and to help you get started on tricky Exam questions. One of the biggest issues with Project Maths is getting the Exam question started.
12. Start today.

Lastly the language of Maths is extremely important especially with the advent of Project Maths in 2008. The State Exams Commission (SEC) have now placed more of an emphasis on students knowing and understanding what things mean instead of just been able to do numerical calculations. There are more words than ever on our Junior and Leaving Cert Maths exam papers and it is crucial that you start familiarising yourself with them. **I have attached a document of thirty-two key words and phrases to get you started here.** These are the main ones that appear on the papers but I would encourage you to read through all past exam papers since 2010, add to my list and investigate the meaning of them yourself. You will be learning through these investigations.

If you are not familiar with the words and phrases that appear on the paper, you may not be even able to get a question started. This would be an awful shame given the amount of time you have spent learning the mathematical side of things. You need to be aware that different words have a different meaning depending on the subject. For example, the word "Evaluate" in Maths is quite different to what it means in English. I believe that knowing the key words and phrases is now a key component of "Ace-ing" a Junior or Leaving Certificate Maths exam paper.

Wishing you good luck students ☺

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Joe has fifteen years' experience teaching Maths and is the Author of Project Maths Solution Books for both Junior and Leaving Certificate students. Checkout his website, <http://www.projectmathsbooks.com>, for more Information on his solution books. Joe also posts a lot of useful links and resources on his Facebook page so feel free to link up with him.

# Explanation of some Keywords and Phrases in Maths

<u>Word/Phrase</u>	<u>Explanation</u>
<b>..in the Domain</b>	May appear in a graphing question... Draw your graph using values between these 2 values. e.g.: $-1 > x > 4$ . In this case, use -1, 0, 1, 2, 3, 4 for the x values on your graph
<b>Calculate</b>	Use your Calculator to find the answer
<b>Construct</b>	This indicates creating/drawing something using a set square, protractor or ruler. Draw it as accurately as you can. e.g. One of the Constructions on the course
<b>Correct to the nearest...</b>	Round off your final answer into the units that are required in the question. e.g. as a Whole number or two decimal places.
<b>Differentiate</b>	Find $f'(x)$ or $dy/dx$ for a given function
<b>Draw a graph</b>	Use graph/grid paper to create an accurate labelled graph with a ruler.
<b>Estimate</b>	Make an approximate guess to the best of your ability without directly using your calculator.
<b>Evaluate</b>	Find the 'value' of a question using your calculator. This normally requires replacing (subbing in) a letter with a number.  e.g. replace 3 wherever x is when you are told ' $x = 3$ '.
<b>Express</b>	This can mean two things:  Put one number over another and find a % OR Express 16 in the form of $2^x$ . The answer is $= 2^4$
<b>Factorise</b>	Write down the factors of. Usually using brackets.
<b>Find</b>	Using the information and/or diagram given, Write down the answer required.
<b>Graph</b>	Draw a neat graph on grid/graph paper with a ruler
<b>Hence</b>	This means: Use the last answer from the previous question. Copy down the previous answer and continue.
<b>Investigate</b>	Check if something occurs or not. It may <u>or</u> may not be true.

<b><u>Word/Phrase</u></b>	<b><u>Explanation</u></b>
<b>List</b>	Write down numbers/letters on a line separated by a comma.
<b>Name</b>	Write down the letters on a shape/angle in the order they appear on the shape/angle.
<b>Plot</b>	This refers to putting co-ordinates (x,y) on an argand diagram for the 'Complex Numbers' topic or simply plotting points on axes
<b>Product</b>	Multiply the terms in the question.
<b>Prove</b>	This word normally occurs when asked to prove a theorem in Geometry. The steps of 'proof' must be written down in a logical order. Similar to "Show", it must be True.
<b>Represent</b>	Can mean: Create or Fill in a Diagram as is required. e.g. A Venn diagram in sets
<b>Rounding</b>	This involves writing down the nearest figure to a specific number. It may involve decimal places. e.g.: Rounding off to 2 decimal places
<b>Shade</b>	Highlight in with your pencil the region or area that is being asked for.
<b>Show</b>	Prove that something definitely does occur. If it doesn't work out to be true, you have made a mistake. Similar to 'Prove', it must be True.
<b>Simplest form</b>	Write down your answer and break it down as simple as possible. This may involve dividing in a number to make it smaller.
<b>Simplify</b>	Make easier by multiplying out the brackets or turning two fractions into one.
<b>Sketch</b>	Make a rough drawing of a diagram, picture, image or graph on your page.
<b>Solution Set</b>	Write final answer in the format of a set after you get the solution to question.
<b>Solve</b>	This normally means: find 'x' or 'y' or both. In Algebra terms, it means 'find the root (s)'.
<b>Sum</b>	Add up the terms in the question.
<b>Use the graph to...</b>	Read a value off your graph as is requested in the question. A ruler might be helpful here. Make sure and show workings on your graph.
<b>Verify</b>	Check your answer by substituting back a number into the original equation/formula. It should always sub in perfectly.

<u><b>Word/Phrase</b></u>	<u><b>Explanation</b></u>
<b>Write down the domain...</b>	<p>1. This is the first number in a list of couples in the order they are written. e.g. If <math>A=(2,3), (3,6), (7,8)</math>. In this case, the domain of A is 2,3,7</p> <p>2. The Domain can also be the set of values you use to draw a graph... <math>0 &lt; x &lt; 6</math>. means construct a graph using x values from 0 up to 6.</p>