



How to avoid the 10 most common exam mistakes

Not long now. Only another ??????? few days / weeks / months to your maths exam - all the very best and I'm sure you've been working hard to make sure you have revised every topic, know where the exam is, have a sharpened pencil, ruler, protractor and everything you'll need.

So. This is it ... and there's only one more set of top tips to remember. How do you get the very best on the day? Here's some thoughts:

1. Think carefully about calculations and show your working

Think carefully about how you are going to work out an answer. There might be a number of techniques that you can use, although whichever you choose, it's good to jot down your thoughts.

Remember a '3 mark' question could take up to 3 minutes, so just writing the answer - even if it's correct - might not be enough to gain top marks. There is usually additional credit for showing your method - make the most of every opportunity to demonstrate that you know what you're talking about!

2. Pick out important words, symbols and units

It might be useful to highlight important words that will tell you what kind of calculation to expect. Learn these key words and actively look for them in your exam paper:

What they say ...	What they mean ...
Added to, total of, sum, summation, combined, together, combined	Add something
less than, fewer than, minus, difference between, decrease by	Subtract or takeaway something
of (used often), multiplied by, product, increase or decrease, factor	Multiply something
ratio, share, percent, per, out of, quotient	Divide something



3. Learn to estimate

Estimation skills are perhaps the most common form of mathematics - a quick glance at change, a rough total at the checkout, are valuable skills to have in real life. So, try to make sure that your answer is sensible:

- Do a rough estimate to see if it's close
- Does the answer feel about right? Can a person really be 54m tall, or could you draw an angle of 0.00006 degrees?

4. Remember the order of calculations

There is a set way of performing calculations, some students call it 'BIDMAS' or 'BODMAS,' or even 'PEDMAS,' it all means the same, and it shows the order:

- brackets first
- then powers
- then division and multiplication (these have equal importance)
- then addition and subtraction (these have equal importance)

You've got to be a little careful if you are putting the information into a calculator - don't forget it's just a machine and can get a little confused about what you want to calculate first (!). It's sometimes helpful to use brackets or calculate step by step ... making sure you write down each answer on the exam paper.

5. Make sure you answer the question

Often students will get an answer correct, but lose marks because they forget to give a reason for their answer, or they forget to add the units.

Sometimes you might need to add a sentence that explains:

- how you worked out an angle or length (Pythagoras? SohCahToa? Sin Rule etc)
- how you came to conclusions about data or graphs - if you are asked to read, put the answer and draw the line on the graph.

Sometimes you might need to add the units:

- check centimetres, litres, metres, degrees
- check if you are asked to give the answer to a certain number of decimal places or significant figures.



6. Learn to use fractions

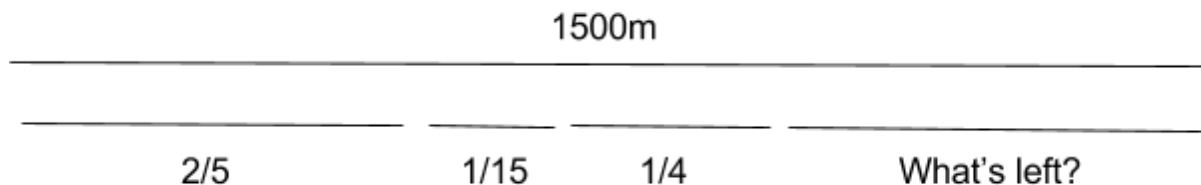
Fractions are around 40% of a typical exam paper and come in many forms. From straight calculations to equations to ratio, proportion, percentage, probability and different types of algebra - there's sure to be a fraction in there somewhere.

Many students are comfortable with decimals ... try to extend your knowledge to understand fractions. In higher level maths they are used quite frequently.

7. Draw the question

Examiners are quite fond of drawing out of scale, or using PQR when every textbook will show XYZ. So a good top tip is to redraw until it makes sense. Word problems can be quite difficult to understand, here's an example:

"Mr S encourages his 5 children to run 1500m. The first child ran $\frac{2}{5}$ of the distance, the second child ran $\frac{1}{15}$, the third child ran $\frac{1}{4}$, the fourth child had a sprained ankle and could not run.* How far did the fifth child need to run to complete the distance"



Drawing a diagram will also help you read the question thoroughly.

8. Remember key facts

You need to know and be able to use the following facts. Look at ways to help remember them:

- The area of a circle is πr^2 and the perimeter is πd .
- The mode is the most common value
- The median is the value in the middle
- The mean is where you add them all up and divide by the number of values
- The probability of an event that is certain to happen is 1
- Right angle triangle? Pythagorus or SohCahToa
- Any other triangle? Sin / cosine rule
- Remember to look out for negative numbers (a -ve multiplied by a -ve is a +ve)



9. and finally ... just don't ...

- Assume a diagram is accurate unless you are definitely told it is. Diagrams are usually marked as 'not drawn accurately' and you will need to calculate an answer.
- Misread scales. Always check, by writing on the scale, values that you have read from a graph. Make sure that they make sense.

10. and finally, finally ... relax (afterwards, you deserve it.)

There you go, and wishing you every success!

* I know I shouldn't laugh but don't you think this is all a little odd?