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Student Life
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Spotting Errors in a Calculation

Study Development Factsheet

Checking your own work (or someone else's) can be quite confusing. Knowing what to look out for can help you to pick up on any mistakes quickly, and you can be sure you have the right answer.

How to check a calculation

1. If you are answering a question, you will need to read through the question again. Make sure that the calculation you have done actually provides an answer to the question.

2. Read through the calculation. Does anything stand out to you as being strange? If you have a calculator, check all the smaller calculations that have been done.

3. If you aren't sure that you have the right answer, try repeating the calculation from the beginning, without looking at the old calculation.

4. You can often check your answer online if you have access to the internet. Websites like Wolfram Alpha, NHS, and online statistical calculators can be very helpful to help you spot mistakes. Try not to rely on these though as you will need to be able to perform calculations without them at some point, and some websites will not give you the right answer.

5. You can ask a friend to also complete the question, and then check each other's answers.

6. If you get a different answer when you check it, cover both of your answers and repeat the calculation. Usually if you get the same answer two out of the three times that you try the calculation, this is the answer that is more likely to be correct.

7. If you now have three answers, read through your notes again. Can you ask anyone for help? If you find it is getting overwhelming, take a break and come back to it with a clean sheet of paper.

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What to look out for

- Does your answer make sense in context? For example, if you have calculated a person's weight, and it has come out as 5kg, that probably means the calculation has gone wrong somewhere.

- Have you missed units anywhere? Make sure you've included units wherever you need them, and that you have chosen the right ones.

- Have you assumed a small calculation is correct when it might not be? Everyone makes mistakes sometimes! If you are in doubt, try repeating the calculations.

- Have you made an assumption somewhere that you can't justify? If there isn't evidence for the assumption, you may have used the wrong piece of information.

- Has a conversion been completed incorrectly? If your answer is off by a factor of 10 then this is usually what has happened.

- If you do a lot of calculations that are quite similar, such as calculating the dosage of insulin, does your answer look close to what you have seen before?

- Have you used the wrong formula or method? Sometimes a key word will cause you to assume you have to use a certain formula when there is actually a more appropriate one.

Remember that everyone gets things wrong sometimes, so try not to be put off by finding mistakes in your work. If you notice you are making similar mistakes a lot, have a look at your course notes again, or look through the maths help sheets. Checking your answers and spotting errors is a skill that takes time and practice to build, but it is very useful once you have learned how to do it.

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