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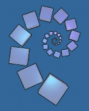
Tackling STEP Questions



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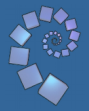
STEP vs A-level

- Measures mathematical ability (not teaching)
- Fluent application of A-level techniques
- Requires you to think for yourself
- As well as ability, confidence is important



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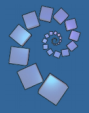
Grade 1 Boundaries

	STEP 1	STEP 2	STEP 3
2013	82	79	63
2014	63	74	59
2015	65	68	65
2016	75	74	64
2017	72	80	69
2018	72	77	59



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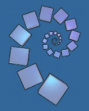
What can you do?

- Expect to get stuck
- “De-compartmentalise”
- Be careful with your algebra
- Sketch graphs and diagrams
- Use “Brute force and ignorance”
- Use solutions (in the right way)
- And PRACTISE!



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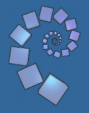
Layout

- Don't use the same letter for two different things
- Label your equations
- Use “cancelling”
- Identify when working is continued
- Use things like i.e. , ⇒ , ∴ , …
- Treat examiners as short on time and patience



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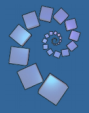
Crossed out work

- Crossed out work is not marked
- Cross out wrong work neatly
- Indicate clearly if crossed out in error
- What if more than one non-crossed out attempt?



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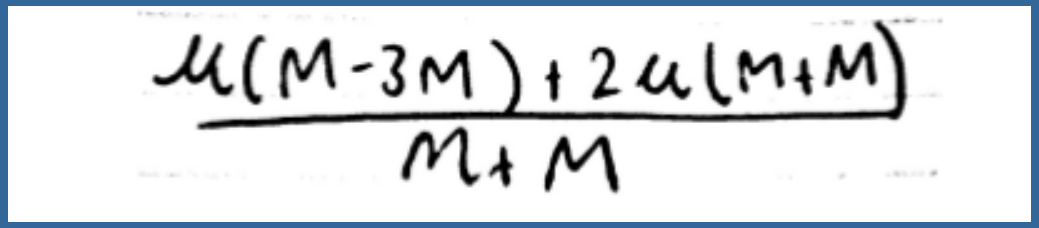
Legibility!

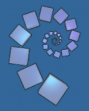
"Another related issue continues to be legibility. Many candidates at some point in the paper lost marks through misreading their own writing. A particularly striking example is shown in this candidate's work:"



"This apparently reads:"

$$\frac{u(M-3m)+2u(M+m)}{M+m}$$

STEP Examiner's Report 2011



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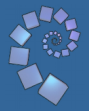
Other tips

- Do not assume what you are trying to prove
- “Show that” / “Prove that”
- “Hence” means you must use the previous part!
- Questions with a “stem”
- Try inputting some numbers or consider a simpler case



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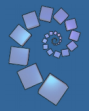
Other tips (2)

- Check your answer is “sensible”; try inputting certain values, make sure probabilities are not greater than 1 etc.
- If trying to prove that $A>B$, it is often easier to prove $A-B > 0$
- Do not divide by something that might be zero!
- RTFQ

  (Read the FULL question)



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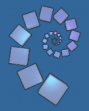
Choosing Questions

- Take 10 mins to read through the questions
- Know your strengths (PRACTISE!)
- Don’t automatically dismiss Statistics and Mechanics
- Questions on “unfamiliar material”
- First question



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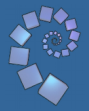
Websites

- maths.org/step
- admissionstestingservice.org
- mei.org.uk/step-aea-solutions
- stepdatabase.maths.org
- desmos.com



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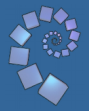
Keeping in touch

Use the forum to:

- Ask questions about STEP questions
- Ask about other aspects of STEP
- Offer feedback on the STEP Support Programme



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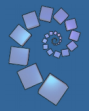
And finally

Good Luck!



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