

[1] What TMUA9. offers.

[2] Action Steps.

PREEMPTIVE WARNING. Start and End with TMUA9.'s past paper analysis on the TMUA, IF you want a 9. As a hub for mathematicians and physicists, TMUA9.does offer adjacent resources. However, it is worth noting that if the prior steps are not done properly, then you are wasting your time. Follow the following manual first.

For each TMUA past paper, TMUA9. offers 3 PDFs and 3 Recordings. Action Steps are offered for each resource.

PDFs. <https://tmua9.com/galleria>

Recordings. <https://www.youtube.com/@TMUA9>

PDFs.

(1) Live.

They are messy, unfiltered footprints of the live-solved workings that are solved under timed conditions. Videos of live-solved workings are uploaded on TMUA9's Youtube Channel, hyperlinks will be provided on TMUA9.'s Galleria:

<https://www.youtube.com/@TMUA9>

[Action Steps.]

* You won't be using these PDFs inherently per se, but there were requests for it, so it is released publicly.

1. Do the same. Solve them live. But do not time them for the first attempt. (unless your goal is to see how your reaction circuits are consolidated, NEVER time them. Sitting mocks under timed conditions does not improve your mathematical skillsets at all whatsoever. Running a broken code does not change the broken code at all.)

2. After solving each question, retrace your thoughts. There is no order to journal your thoughts, but it is suggested to do it alongside solving the questions. Do it midst first solving a question. Write why you are stuck at a certain process, which

part is confusing, the thoughts that pop up as you are solving them. Write it honestly.
e.g.)

'Damn what is this? There is no way that this is the way to solve this... why? Because this is way too much computation, I might have to pivot to graphs maybe?'

'I don't get this part. Okay WHAT is it exactly that is causing me frustration. That I don't know the length of AB. Okay so is it a good idea to set that as a variable? Yeah I guess we can try that.'

* Do not erase anything that you did that turned out to be wrong. Your eraser is your enemy, removing the wrong routes you took is removing the raw materials that you will be working with later on. Don't be embarrassed to confront them, those are what you should change.

(2) Model Answers.

They are simple written workings of the model answer for each question, alongside the annotations inclusive of the following:

- "what" you had to know to solve the question. (knowledge gaps)
- "how" you needed to react with certain cues. (retracement of critical thoughts that must be)
- some caveats and cautions for potential mistakes that could be made.
- remarks.

[Action Steps.]

Read https://tmua9.com/downloads/TMUA9_Blueprint.pdf prior to reading the model answers. Everything that you must enact is specified to great detail.

* If all you do is solve everything in timed conditions, skim through the model answers, nod, then move on, absolutely nothing about your TMUA score will change, no matter how hard you do this. Even if you repeat that entire broken algorithm for all the resources that are provided on TMUA9., you are doing work of extremely low yield. Do the work that counts,

once, properly.

(3) Analysis.

Built on the Model Answer Scaffolding, I dive deeply into the most important things that you must know when preparing for the TMUA: The "Why".

- "Why" was such a reaction obvious mathematically.
- confluences/command terms and the necessary reaction circuits that we can extract from this.

[Action Steps.]

1. Read https://tmua9.com/downloads/TMUA9_Blueprint.pdf again. Do read it again.

2. Emulate the analysis yourself. The analysis is a presentation, and in private consultations we will fix your thought process. However, trying out the analysis for your thought process is orders of magnitude higher ROI (Return on Investment) relative to passive input of knowledge.

One is greater than zero. A flawed, self conducted analysis is much greater progress than ending a paper just after reading something and nodding.

Lectures.

(1) Live.

The lived, timed workings in a stopwatch of each paper are posted online. They are not solved in advance.

(2) Window.

The live thought processes that are going on internally are presented live. This is for you to see firsthand of the internal thought process of someone who got a 9.0 on the TMUA, and each paper takes less than half the time.

[Action Steps.]

- Take notes on the internal thought process of yours that differ from the presented thought process. (It is worth noting that my thought process can still be improved, frequently

calculation errors and mistakes are made) You must be notetaking on: what are the thought processes that must be emulated, and what are the command terms (=confluences/entry signals) that I can equip myself with.

- You will see yourself that even someone who got a 9.0 on the TMUA is full of errors, has ideas that have zero yield, and mistakes still exist. Realise the truth that even if you reach a level of consistently getting 9.0 on the TMUA never going over half the time, errors itself will not be eradicated. It's just that the density of their manifestation decreases.

(3) Model Answers. & Analysis.

This Lecture discusses the following:

- Knowledge that you had to know for each question.
- The exhaustive list.

[Action Steps.]

Before watching the Lecture: Do a preliminary metacognitive analysis.

1. Write down your thought process in two ways: (1) mathematical chain of reasoning, and (2) verbal flow of chain of thought

- Compartmentalise the thought process as specifically as you can.
- Read your thought process as if you are grading someone and picking out what they are wrong, and in a different colour, write out what it would take to eliminate each process. -> Derive your own version of an "ideal chain of reasoning."

2. Verbally articulate in general form what a question consists of. Connect it to the ideal chain of reasoning, of how you should have reacted.

3. Take notes on the lecture that you did not know, new formulas that you did not know prior to the lecture.

4. Reread your notes repetitively. These handwritten notes of yours are going to be the most important resources for your TMUA preparation.