Things that people find hard in 3U

* Circle geometry (because it’s often difficult to see and not very algorithmic)
  + A list of the theorems (because you can never have too many of them) **with proofs** (because they help a bit)
* Trigonometric proofs (because it’s not very algorithmic)
  + Certain tips and tricks (like converting things into sine and cosine, factorising, combining fractions, starting with one side and turning it into the other)
* Permutations and combinations (can be conceptually tricky and questions often get quite hard)
* Locus, the parabola and parametrics (the locus is one of the worst explained concepts in all of high school maths; is a bit abstract; proofs are a bit heavy sometimes; harder questions occasionally rely on obscure geometric facts that most students don’t remember)
  + Proofs
  + Example questions

Things that people find hard in 4U

* Everything (that’s a joke)
* Graphical interpretation of complex numbers (because vectors are not in the course anywhere and this is basically just vectors in two dimensions)
* Conics, especially proofs (can be algebraically challenging)
* Mechanics (similarly)
* Harder 3 unit, especially things like circle geometry and combinatorics

Ways in which we might want to consider delivering content

* **Practice questions** – perhaps put regular practice questions/past HSC questions (I think Talent used to do something like this?)
* **Graphics/animations** – a decent amount of stuff is very geometric, hence lends itself well to being delivered visually. Tools exist to create animations or graphics than can depict certain concepts or theorems (e.g. differentiation, integration, geometric theorems including circle geometry, trigonometry)
* **Sharing exam/topic tips and tricks** – I’m sure people would be eager to hear how other students like to tackle problems; I can share some of my own strategies and comment on others’.
* **Q&A sessions** (time allowing)? Though I think this might be a regular feature of the group; it’s meant to be about discussion, after all. Dedicating time specifically to this may not be productive, people will ask questions at all times.
* **Discussion of more advanced ideas** – I reckon this is a big maybe. Definitely not a priority, if students have difficulty understanding more basic ideas then introducing more advanced concepts, particularly ones that are not directly relevant to their assessment, is not very helpful.

Major events (there aren’t that many)

* People will need to decide if they want to do 4U soon
* Prelims are in September
* Some people who do accelerated 2U will be doing trials in September, HSC in October
* Beginning year 12 in term 4 (~October)

Talent 100 things (not sure…)

* We do classes and tutorials

Be results oriented:

* Show mathematics results and qualifications of tutors
* Explaining concepts, not just rote-learning
* Difficulty of questions
  + Primary – harder stuff, promote Talent
  + Secondary –

Funnel

* Showing off what Talent has to offer, as in like quality content; build relationships
* Pain points: e.g. trials, exams, assignments – remind them that they have them and offer solutions
  + School: exams, content
  + Areas that students struggle with
* Workshop on areas they struggle with: solution to one of the pain points (2-3 hrs, basically a class)
* Back into group
* Pain point: write article
* Offer Talent 100 classes

Give advice on 3U maths