

# Tom's to-do list

## Guides alluded to in materials but no files exist yet

- Rationalizing the denominator (priority, Max)
- Multiple revolutions and negative angles
- Arithmetic on complex numbers (Charlotte)
- Factorization
- Even and odd functions
- Trigonometry and integration
- Solving simultaneous equations (priority, Ollie)
- Rearranging with factorization and reciprocals
- Finding lines and angles using trigonometry
- Inverse trigonometric functions
- Introduction to probability
- Discrete and continuous random variables
- Introduction to integration
- Properties of integration
- Introduction to probability distributions
- Overview of numbers
- Straight lines
- Errors in hypothesis testing

## Guides wanted

### Maths

- Introduction to derivatives and the limit definition (tdhc drafting 10/24)
- Proof sheet: Derivatives of common functions from first principles
- Product rule (tdhc drafting 10/24)
- Chain rule (tdhc drafting 10/24)
- Quotient rule (tdhc drafting 10/24)
- Introduction to integration
- The Fundamental Theorem of Calculus
- Integration by substitution

- Integration by parts
- Factorials and the binomial coefficient
- Injective and surjective functions

## Stats

- Fact sheet: Differentiation for statisticians
- Fact sheet: Integration for statisticians
- Introduction to probability
- Conditional probability and Bayes' Theorem
- Intro to random variables
- PMFs and PDFs (Sophie C)
- Central limit theorem
- Introduction to hypothesis testing (Ellie)
- The normal distribution
- (Guides on distributions)
- Fact sheet: Discrete random variables versus continuous random variables
- What is a p-value? (AL)

## Guides for which files exist in some guise

### Arithmetic and algebra

Topic	Link to guide	Link to questions	Link to answers
Introduction to quadratic equations	done	cat	cat
Completing the square	done	cat	cat
The quadratic formula	done	cat	cat
Laws of indices	done	cat	cat
Solving exponential equations	done	cat	cat
Introduction to logarithms	done	cat	cat
Sigma notation	done	cat	cat
Rearranging equations	done	cat	cat
Further sigma notation (DRAFT)	write	write	write

Topic	Link to guide	Link to questions	Link to answers
Rearranging trig and logs	<a href="#">split</a>	<a href="#">split</a>	<a href="#">split</a>

## Angles and trigonometry

Topic	Link to guide	Link to questions	Link to answers
Radians	<a href="#">done</a>	<a href="#">cat</a>	<a href="#">cat</a>
Introduction to trigonometry	<a href="#">done</a>	<a href="#">cat</a>	<a href="#">cat</a>
Trigonometric identities	<a href="#">done</a>	<a href="#">cat</a>	<a href="#">cat</a>

## Vectors

Topic	Link to guide	Link to questions	Link to answers
Introduction to vectors	<a href="#">done</a>	<a href="#">cat</a>	<a href="#">cat</a>
Addition and scalar multiplication	<a href="#">done</a>	<a href="#">cat</a>	<a href="#">cat</a>
The scalar product	<a href="#">done</a>	<a href="#">cat</a>	<a href="#">cat</a>

## Factsheets

Topic	Link to factsheet
Laws of indices	<a href="#">cat</a>
Greek letters	<a href="#">cat</a>

## Proof sheets

Topic	Link to proof sheet
Quadratic formula	<a href="#">cat</a>
Scalar product	<a href="#">cat</a>

<b>Topic</b>	Link to proof sheet
Trigonometric identities	under construction
Properties of sigma notation	under construction