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 |
| Rearranging trig and logs | split | split | split |

## Angles and trigonometry

| **Topic** | Link to guide | Link to questions | Link to answers |
| --- | --- | --- | --- |
| Radians | done | cat | cat |
| Introduction to trigonometry | done | cat | cat |
| Trigonometric identities | done | cat | cat |

## Vectors

| **Topic** | Link to guide | Link to questions | Link to answers |
| --- | --- | --- | --- |
| Introduction to vectors | done | cat | cat |
| Addition and scalar multiplication | done | cat | cat |
| The scalar product | done | cat | cat |

## Factsheets

| **Topic** | Link to factsheet |
| --- | --- |
| Laws of indices | cat |
| Greek letters | cat |

## Proof sheets

| **Topic** | Link to proof sheet |
| --- | --- |
| Quadratic formula | cat |
| Scalar product | cat |
| Trigonometric identities | under construction |
| Properties of sigma notation | under construction |