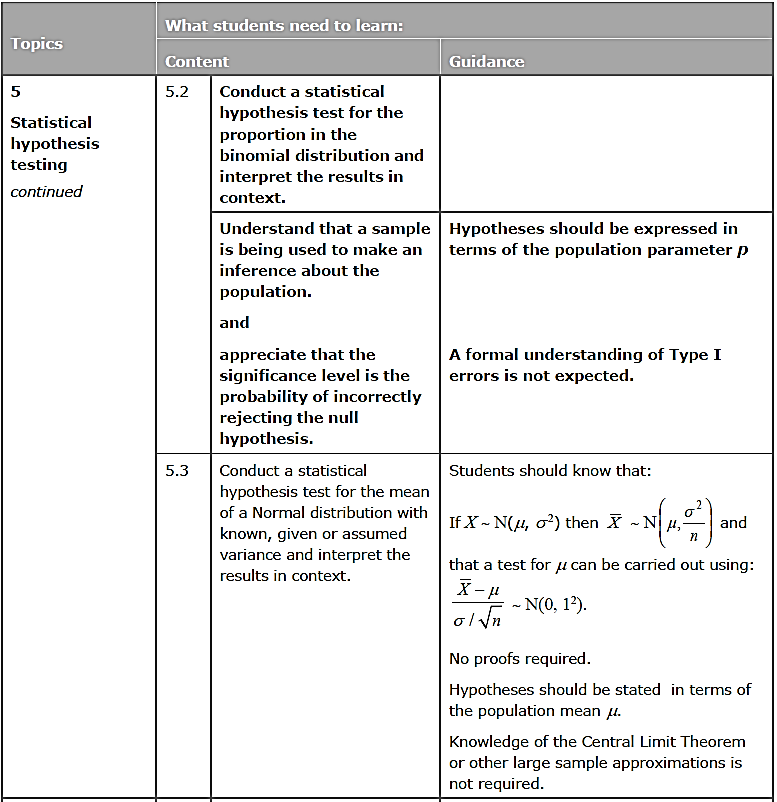
A Level Mathematics

Chapter 7 - Statistics

Hypothesis Testing

Chapter Overview

1. Hypothesis Testing
2. Finding Critical Values
3. One-Tailed Tests
4. Two-Tailed Tests



1. **Hypothesis Testing**

**What is Hypothesis Testing?**

**Vocabulary:**

**Hypothesis** = statement about the value of a population parameter

**Test Statistic** = the result of the experiment, or the statistic that is

calculated from the example

**Null Hypothesis, H0** = the hypothesis you assume is correct

**Alternative Hypothesis, H1** = tells you about the parameter if your

assumption is shown to be wrong

**Example**

10% of the world’s population are left-handed. On my holiday to Hawaii, I want to establish if the proportion of left-handed people in Hawaii is greater than the world average. I have a table of 20 people as my sample. I need to ensure any result I get is **statistically significant**.

1) What is the hypothesis?

2) What is the population parameter?

In my sample of 20 people in Hawaii, I find that 5 are left-handed.

3) Suggest a null hypothesis (the hypothesis I assume is correct)

4) Suggest an alternative hypothesis (what happens to my parameter if my assumption is wrong)

5) What is the test statistic?

