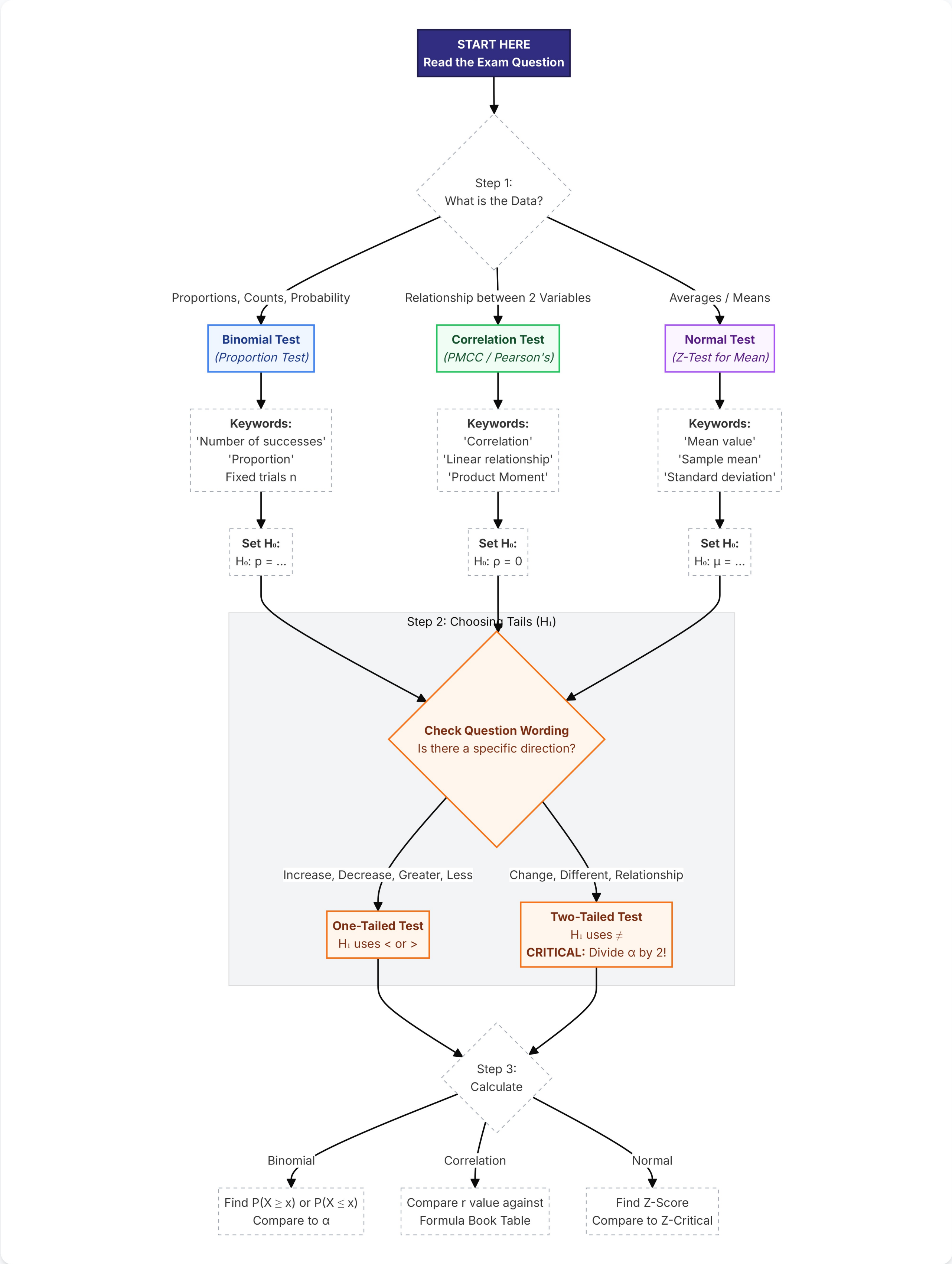


Hypothesis Testing Decision Tree

Edexcel A Level Statistics (AS & A Level)



Binomial Test

AKA: Proportion Test

Symbol: p (Probability)

Variable: X (Count)

Distribution: $X \sim B(n, p)$

Test: Calculate probability of result and more extreme.

Correlation Test

AKA: PMCC, Pearson's, Linear

Symbol: ρ (Rho)

Statistic: r (from calculator)

Note: Tests for *Linear* correlation only.

Test: Compare 'r' to critical value table.

Normal Test

AKA: Z-Test, Test for Mean

Symbol: μ (Mu - Mean)

Statistic: \bar{x} (Sample Mean)

Distribution: $\bar{X} \sim N(\mu, \sigma^2/n)$

Test: Calc Z-score. If sample is large ($n > 30$) but pop. not normal, cite CLT.

Tails Guide

Critical Decision

One-Tailed (< or >)

"Increased", "Decreased", "More than", "Positive correlation".

Two-Tailed (≠)

"Changed", "Different", "Is there a relationship?", "Is the coin biased?".

⚠️ ALERT: For 2-tailed, you MUST divide the significance level (α) by 2. (e.g. 5% becomes 2.5% at each end).