

WJEC Wales Biology

A-level

SP Unit 4 03 - Gene Segregation

Flashcards



What are phenotypes?



What are phenotypes?

The observable characteristics of an organism, shown as a result of the interaction between the genotype and the environment.



What is the chi-squared test used for?



What is the chi-squared test used for?

Comparing observed against expected values.



State the possible Mendelian ratios.



State the possible Mendelian ratios.

1:1:1:1

3:1

9:3:3:1



What does the critical value indicate?



What does the critical value indicate?

If the calculated value is smaller than the critical value at $p=0.05$, there is no statistically significant difference between the observed and expected ratios.



How are the degrees of freedom
calculated for chi squared?



How are the degrees of freedom calculated for chi squared?

DOF = number of categories - 1



State the null hypothesis for this practical.



State the null hypothesis for this practical.

There is no statistically significant difference between the observed and expected ratios.



What is the method to this practical?



What is the method to this practical?

1. Identify the phenotypes shown on the cob and count the number of each.
2. Find a suitable Mendelian ratio close to the observed ratio of the cob phenotypes.
3. Use the chi squared test.
4. Deduce the genotype of the parent plants

