O · Statistical hypothesis testing

AQA · A-Level · Mathematics · Vocabulary in context

Word	Example
statistical hypothesis testing	**Statistical hypothesis testing** checks whether data give enough evidence against a claim.
null hypothesis /nʌl haɪˈpɒθəsɪs/	The **null hypothesis** specifies the parameter value being tested.
alternative hypothesis /ɔːlˈtɜːnətɪv haɪˈpɒθəsɪs/	The **alternative hypothesis** says the coin favours heads.
test statistic /test stəˈtɪstɪk/	The **test statistic** is the value calculated from the sample and compared with the critical region.
significance level /sɪgˈnɪfɪkəns ˈlevl/	Set the **significance level** before looking at the observed result.
critical region /ˈkrɪtɪkl ˈriːdʒn/	If the test statistic falls in the **critical region**, we reject the null hypothesis.
critical value /ˈkrɪtɪkl ˈvæljuː/	The **critical value** is the edge of the critical region.
p-value /piː ˈvæljuː/	A **p-value** smaller than the significance level gives evidence to reject the null hypothesis.
one-tailed test	A **one-tailed test** checks for a change in one direction only, such as an increase.
two-tailed test	In a **two-tailed test** at the 5% level, put 2.5% in each tail. 5% 2.5%
actual significance level	The **actual significance level** is the real chance of rejecting a true null hypothesis.

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correlation coefficient /ˌkɒrɪˈleɪʃn ˌkəʊɪˈfɪʃənt/	The **correlation coefficient** r of a sample estimates the population value ρ. r ρ