Multiple choice questions - Hypothesis testing

Year: Year 12 · 10

Question 1 The null hypothesis is usually

- ◯ **A.** the claim being tested
- ◯ **B.** what you hope to prove
- ◯ **C.** a result of the sample
- ◯ **D.** a probability

Question 2 $H_1 : p \neq 0.5$ is

- ◯ **A.** one-tailed
- ◯ **B.** two-tailed
- ◯ **C.** a null hypothesis
- ◯ **D.** a critical value

Question 3 In a two-tailed test at 5% each tail is

- ◯ **A.** 5%
- ◯ **B.** 2.5%
- ◯ **C.** 10%
- ◯ **D.** 1%

Question 4 If the p-value is less than the significance level we

- ◯ **A.** reject H_0
- ◯ **B.** accept H_0
- ◯ **C.** repeat the test
- ◯ **D.** change H_1

Question 5 The critical region is

- ◯ **A.** values of the test statistic leading to rejection of H_0
- ◯ **B.** values that support H_0
- ◯ **C.** the mean
- ◯ **D.** the p-value

Question 6 The test statistic for a binomial test is

- ◯ **A.** p
- ◯ **B.** n
- ◯ **C.** number of successes X

- ◯ **D.** the p-value

Question 7 The hypotheses should be written in terms of

- ◯ **A.** X
- ◯ **B.** p
- ◯ **C.** n
- ◯ **D.** the sample mean

Question 8 $P(X \geq 10)$ is found as

- ◯ **A.** $P(X \leq 10)$
- ◯ **B.** $1 - P(X \leq 9)$
- ◯ **C.** $1 - P(X \leq 10)$
- ◯ **D.** $P(X = 10)$

Question 9 The actual significance level of a critical region is

- ◯ **A.** always 5%
- ◯ **B.** the probability of the region under H_0
- ◯ **C.** the p-value
- ◯ **D.** the power

Question 10 If you do not reject H_0 you should conclude

- ◯ **A.** H_0 is proved
- ◯ **B.** there is insufficient evidence to reject H_0
- ◯ **C.** H_1 is false
- ◯ **D.** $p = 0$

Answer grid - Hypothesis testing

Year: Year 12

Question	Answer	Explanation
1	**A**	It is assumed true.
2	**B**	Both directions.
3	**B**	Split in half.
4	**A**	Result is unlikely under H_0.
5	**A**	Definition.
6	**C**	Observed count.
7	**B**	Population parameter.
8	**B**	Complement.
9	**B**	Its true probability.
10	**B**	Wording matters.