



Hypothesis Testing

SCORE

___ / 20

Chapter: Statistics • Level ★★★ • Time: 30 min

Name _____ Class _____ Date _____

AFTER THIS WORKSHEET YOU CAN

- ✓ Compare a p-value to the significance level α . ✓ Decide whether to reject the null hypothesis.
- ✓ Identify a Type I error. ✓ Understand the effect of changing α .

 Section A • Concept Check • BEGINNER $4 \times 1 = 4$ _____

- 1** If p-value = 0.03 and $\alpha = 0.05$, do we reject H_0 ?
☐ A. Yes ☐ B. No ☐ C. Cannot tell
☐ D. Only sometimes

3 A Type I error is:
☐ A. rejecting a true null hypothesis
☐ B. accepting the null ☐ C. a correct decision
☐ D. failing to reject a false null

2 If p-value = 0.5 and $\alpha = 0.01$, do we reject H_0 ?
☐ A. Yes ☐ B. No ☐ C. Cannot tell ☐ D. Always

4 Lowering α from 0.05 to 0.01 makes rejecting H_0 :
☐ A. harder ☐ B. easier ☐ C. impossible
☐ D. unchanged

 Section B • Problem Solving • INTERMEDIATE $2 + 3 \times 3 = 11$ _____

- 5** We reject H_0 when the p-value is _____ than α .
- 6** A Type _____ error is rejecting a true null hypothesis.
- 7** If p-value = 0.03 and $\alpha = 0.05$, do we reject H_0 ?

- 8** If p-value = 0.5 and $\alpha = 0.01$, do we reject H_0 ?

- 9** What is a Type I error?

 Section C • Challenge • CHALLENGE 5 _____

- 10** If $\alpha = 0.01$ instead of 0.05, is it harder or easier to reject H_0 ?

 Reflection — the most useful thing I learned: _____
A ___/4 B ___/11 C ___/5 **Total** ___/20

Teacher's Signature _____

Parent's Signature _____

✂ ANSWER KEY — FOLD OR CUT BEFORE HANDING OUT

1-A 2-B 3-A 4-A | 5 less 6 I 7 = Yes, since $0.03 < 0.05$ 8 = No, since $0.5 > 0.01$ 9 =
 Rejecting a true null hypothesis (a false alarm) | 10 = Harder

