

Name: _____

LA Initials:

BIOL 275 Lab 9 Contingency Analysis

Dataset and Variables

1. What is the name of the sleep variable? The depression variable? The variable that serves as the unique identifier for individuals?

Part I – Prepare the Data

2. How many rows are there in the depression dataset (after removing rows with missing values)?

3. How many rows are there in the sleep dataset (after removing rows with missing values)?

4. How many rows are there in the joined dataset?

5. Draw the contingency table here. (two columns, labeled; two rows, labeled)

Part 3 – Estimate Relative Risk

6. What is the risk of depressive symptoms in short sleepers? Long sleepers?

7. What is the relative risk? Interpret your result in a complete sentence.

Part 4 – Test for Independence

8. Write the null and alternative hypotheses in words.

9. Write the χ^2 test statistic, P -value, and whether you reject or fail to reject the null hypothesis.

10. Can we conclude that short sleep causes depression? Why or why not?