

- p. 580: 8. (20 pts) Suppose that the unemployment rate in the United States is 0.05. A city mayor would like to determine if the unemployment rate for her city is higher than that for the United States. A random sample of 2000 adult residents of the city was collected, and 125 turned out to be unemployed.
- (a) (5 pts) State the appropriate null and alternative hypotheses.
 - (b) (10 pts) Calculate the value of the test statistic for testing H_0 and H_1 , and give the p -value.
 - (c) (5 pts) State the results for a 1% level test. What is your decision? What does the decision suggest about the unemployment rate for this city?