**1.** True or false, and explain:

**(a)** **The p-value of a test equals its observed significance level.**

**(b)** **The alternative hypothesis is another way of explaining the results; it says the difference is due to chance.**

**2. Five hundred draws are made at random with replacement from a box of numbered tickets; 276 are positive. Someone tells you that 50% of the tickets in the box show positive numbers. Do you believe it? Answer yes or no, and explain.**

**Excel(Hypothesis Testing 1)**

A researcher assessed the role of routine walking in physical fitness. In this experiment n=60 pair of subjects were matched for age, gender and weight. However, one member of each pair typically walked to work, whereas the other typically drove. Subjects were given a physical fitness test. Their fitness scores are reported in the attached excel file. The higher the fitness score, the better.

The file contains two variables:

  - fitness score in group 1 (walkers)

  - fitness score in group 2 (drivers)

What should be the researcher conclusion? Write a brief report of paragraph commenting on the conclusion.