2002 Multiple Choice #24 Homework Problem Wednesday 04/29

24. A consulting statistician reported the results from a learning experiment to a psychologist. The report stated that on one particular phase of the experiment a statistical test result yielded a p-value of 0.24. Based on this p-value, which of the following conclusions should the psychologist make?

(A) The test was statistically significant because a p-value of 0.24 is greater than a significance level of 0.05.
(B) The test was statistically significant because $p = 1 - 0.24 = 0.76$ and this is greater than a significance level of 0.05.
(C) The test was not statistically significant because 2 times $0.24 = 0.48$ and that is less than 0.5.
(D) The test was not statistically significant because, if the null hypothesis is true, one could expect to get a test statistic at least as extreme as that observed 24% of the time.
(E) The test was not statistically significant because, if the null hypothesis is true, one could expect to get a test statistic at least as extreme as that observed 76% of the time.