

STAT 251 Statistical Inference for Management I Winter 2012

Quiz 23

Taken on Wed Mar 7. You may work with a group of as many students as you like, submitting one quiz with all names, as long as everyone contributes to the work. You may use your notes.

I once read an article which argued that tall people have an advantage in American business. The article claimed that the average height of male CEO's (chief executive officers) of U.S. companies is larger than 69 inches, which is the average height among all adult American males.

1-2. State (in symbols) the appropriate null and alternative hypotheses for testing the article's claim.

3. Identify (in words) what the symbol in your hypotheses represents. (In other words, identify the relevant parameter of interest here.)

Now suppose that a random sample of 50 male American CEO's produces a sample mean height of 70.7 inches.

4. Would a small or a large standard deviation (of the CEO heights) provide stronger evidence in support of the article's claim? (Answer either "small" or "large".)

5. If the sample size were increased to 250, and if the sample mean and standard deviation turned out the same, would that provide stronger evidence for the article's claim or less strong evidence for the article's claim? (Answer either "stronger" or "less strong".)