Your Name: _____

Names of people you worked with: _____

Instructions: Work on this problem in class with your group (if you are attending class synchronously) or out of class (hopefully with a person or two! if you are attending class asynchronously). The problem should be done on a piece of paper with a pencil or on some kind of tablet. The problem should **not** by typed up or done in LaTeX.

Work for a *maximum* of 15 minutes on the problem (regardless of what time you are working). *Do not* come back to the problem to "fix it up" or "finish it." Be sure to write down the names of the people you worked with during class (or outside of class).

Take a picture of your work and use a scanning app to create a pdf (or create a pdf directly from your tablet). Upload your work to Gradescope (via Sakai) within 24 hours of class.

Task: Assume weights of cereal in 10oz boxes are normally distributed, $N(\mu, \sigma^2)$, both unknown. To test whether or not the box label is accurate, we set up our hypotheses:

$$H_0 : \mu = 10\text{oz}$$
$$H_1 : \mu \neq 10\text{oz}$$

- Find the critical region for this test with a size of 0.05.

- Also, given a sample of size 16 cereal boxes with a mean weight of 10.4oz and a standard deviation of 0.85oz, find the p-value for the data.