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: Consider a test δ with size $= \alpha_0$ on data which are iid $(N\mu, \sigma^2)$. You are testing the following hypotheses:

$$H_0 : \quad \mu \geq \mu_0$$
$$H_1 : \quad \mu < \mu_0$$

Fill in the following table:

power	= or < or > or →	α_0 or $1 - \alpha_0$ or 0 or 1	when
$\pi(\mu, \sigma^2 \mid \delta)$			$\mu = \mu_0$
$\pi(\mu, \sigma^2 \mid \delta)$			$\mu > \mu_0$
$\pi(\mu, \sigma^2 \mid \delta)$			$\mu < \mu_0$
$\pi(\mu, \sigma^2 \mid \delta)$			$\mu \to \infty$
$\pi(\mu, \sigma^2 \mid \delta)$			$\mu \to -\infty$