

Your name: .....

Names of people you worked with: .....

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

$$H_0 : \mu \geq \mu_0$$

$$H_1 : \mu < \mu_0$$

Fill in the following table (for a size  $\alpha_0$  test with reasonable properties):

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