Test the following hypotheses.

$n = 100$	$\bar{x} = 4.35$	$\sigma = 0.18$	$H_0: \mu \geq 4.40$	$H_1: \mu < 4.40$	$\alpha = 2\%$
$n = 65$	$\bar{x} = 100$	$\sum (x_i - \bar{x})^2 = 842.4$	$H_0: \mu = 99.2$	$H_1: \mu \neq 99.2$	$\alpha = 5\%$
$n = 16$	$\bar{x} = 11$	$\hat{s}^2 = 81$	$H_0: \mu \leq 10$	$H_1: \mu > 10$	$\alpha = 1\%$
$n = 17$	$\bar{x} = 35.6$	$\sum (x_i - \bar{x})^2 = 1471.8$	$H_0: \mu = 40$	$H_1: \mu \neq 40$	$\alpha = 5\%$
$n = 300$	$x = 213$		$H_0: \pi = 0.65$	$H_1: \pi \neq 0.65$	$\alpha = 1\%$
$n_1 = 20$ $n_2 = 25$	$\sum x_1 = 95$ $\sum x_2 = 135$	$\sigma_1^2 = 2.3$ $\sigma_2^2 = 2.5$	$H_0: \mu_1 \geq \mu_2$	$H_1: \mu_1 < \mu_2$	$\alpha = 2\%$
$n_1 = 200$ $n_2 = 300$	$\sum x_1 = 18470$ $\sum x_2 = 27663$	$\sigma = 0.86$	$H_0: \mu_1 = \mu_2$	$H_1: \mu_1 \neq \mu_2$	$\alpha = 10\%$
$n_1 = 65$ $n_2 = 80$	$\sum x_1 = 5369$ $\sum x_2 = 4672$	$\sum (x_1 - \bar{x}_1)^2 = 8886$ $\sum (x_2 - \bar{x}_2)^2 = 5026$	$H_0: \mu_1 - \mu_2 \leq 20$	$H_1: \mu_1 - \mu_2 > 20$	$\alpha = 1\%$
$n_1 = 8$ $n_2 = 10$	$\sum x_1 = 238.4$ $\sum x_2 = 206$	$\sum (x_1 - \bar{x}_1)^2 = 296$ $\sum (x_2 - \bar{x}_2)^2 = 145$	$H_0: \mu_1 - \mu_2 \leq 4$	$H_1: \mu_1 - \mu_2 > 4$	$\alpha = 1\%$
$n = 6$	$\sum d_i = 16$	$\sum \left(d_i - \bar{d}\right)^2 = 15.33$	$H_0: \mu_D = 0$	$H_1: \mu_D \neq 0$	$\alpha = 2\%$
$n_1 = 200$ $n_2 = 150$	$x_1 = 56$ $x_2 = 29$		$H_0: \pi_1 - \pi_2 \geq 0.1$	$H_1: \pi_1 - \pi_2 < 0.1$	$\alpha = 6\%$
$n_1 = 80$ $n_2 = 60$	$x_1 = 40$ $x_2 = 23$		$H_0: \pi_1 \leq \pi_2$	$H_1: \pi_1 > \pi_2$	$\alpha = 5\%$
$n_1 = 1000$ $n_2 = 1000$	$p_1 = 0.09$ $p_2 = 0.12$		$H_0: \pi_2 \leq \pi_1$	$H_1: \pi_2 > \pi_1$	$\alpha = 5\%$