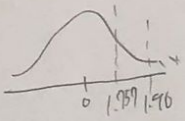
6.

(1)

$H_0: \mu = 4.3$

$H_1: \mu \neq 4.3$

$Z_{0.025} = 1.96$



$$\frac{4.65-4.3}{\frac{1.26}{\sqrt{80}}} = 1.757$$

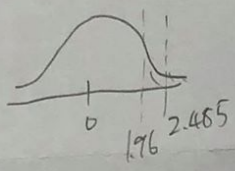
Accept H_0 #

(2)

$H_0: \mu = 4.3$

$H_1: \mu \neq 4.3$

$Z_{0.025} = 1.96$



$$\frac{4.65-4.3}{\frac{1.26}{\sqrt{80}}} = 2.485$$

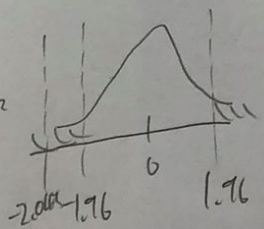
Reject H_0 #

7.

$H_0: \mu_1 = \mu_2$

$H_1: \mu_1 \neq \mu_2$

$Z_{0.025} = 1.96$



$$\frac{(\bar{x}-\bar{y})-0}{\sqrt{\frac{s_1^2}{n_1}+\frac{s_2^2}{n_2}}} = \frac{38.3-40.1}{\sqrt{\frac{40}{100}+\frac{30}{80}}} = -2.045$$

Reject H_0 #

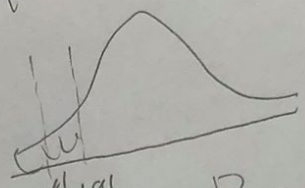
8

$H_0: \mu_1 = \mu_2$

$H_1: \mu_1 \neq \mu_2$

$$\frac{(\bar{x}-\bar{y})-0}{s_p\sqrt{\frac{1}{n_1}+\frac{1}{n_2}}} = \frac{32-34}{3.43\sqrt{\frac{1}{64}+\frac{1}{81}}} = -3.486$$

$$s_p = \sqrt{\frac{(n_1-1)s_1^2+(n_2-1)s_2^2}{n_1+n_2-2}} = \sqrt{\frac{63\cdot 3.2^2+80\cdot 3.6^2}{143}} = 3.430$$



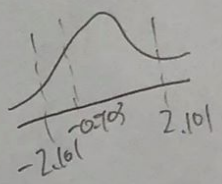
Reject H_0 #

9.

$t_{0.025}(18) = 2.101$

$H_0: \mu_1 = \mu_2$

$H_1: \mu_1 \neq \mu_2$



$$\frac{(\bar{x}-\bar{y})-0}{s_p\sqrt{\frac{1}{n_1}+\frac{1}{n_2}}} = \frac{(82.6-84.9)}{5.693\sqrt{\frac{1}{10}+\frac{1}{10}}} = -0.903$$

Accept H_0 #

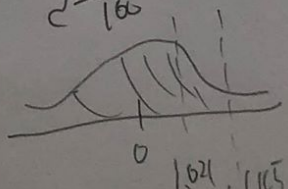
$$s_p = \sqrt{\frac{9\times(4.3245)^2+9\times(6.6595)^2}{18}} = 5.693$$

10. Z檢定 $H_0: P \geq 0.04$

$H_1: P < 0.04$

$Z_{0.05} = 1.645$

$$Z = \frac{\hat{P}-\hat{P}_0}{\sqrt{\frac{P_0(1-P_0)}{n}}} = \frac{0.45-0.4}{\sqrt{\frac{0.4\times 0.6}{100}}} = 1.021$$



Reject H_0 #