μ_1, μ_2

- H_0

$$H_0 : \mu_1 = \mu_2$$

- H_1

$$H_1 : \mu_1 \neq \mu_2$$

$H_1 : \mu_1 < \mu_2 H_1 : \mu_1 > \mu_2$

$$t = \frac{(\bar{x}_1 - \bar{x}_2)}{\sqrt{s_p^2 \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

- $\bar{x}_2 \bar{x}_1$
- $n_2 n_1$
- $n_2 n_1 s_2^2 s_1^2 s_p^2$

d

$$d_i = X_{1i} - X_{2i}$$

$\bar{d}iX_{2i}X_{1i}$

μ_d

- H_0

$$H_0 : \mu_d = 0$$

- H_1

$$H_1 : \mu_d \neq 0$$

$\bar{d}$

$$t = \frac{\bar{d}}{s_d/\sqrt{n}}$$

- $\bar{d}$
- s_d
- n

α

$1 - (1 - \alpha)^k$

$\alpha_{new} k \alpha_{original}$

$$\alpha_{new} = \frac{\alpha_{original}}{k}$$

$\alpha_{new} = \frac{0.05}{10} = 0.005 k = 10 \alpha = 0.05$

$\alpha_{original}$