

# 檢定總整理

①  $H_0: p = 0.5$

$$Z = \frac{\hat{p} - 0.5}{\text{○}} \\ \sim N(0, 1)$$

②  $H_0: p_1 = p_2$

$$Z = \frac{\hat{p}_1 - \hat{p}_2}{\text{○}} \\ \sim N(0, 1)$$

③  $H_0: \mu = 10$

$$t = \frac{\bar{X} - 10}{\text{○} \swarrow se(\bar{X})} \\ \sim t(n-1)$$

④  $H_0: \mu_1 = \mu_2$

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\text{○}} \\ \sim t(n_1 + n_2 - 2)$$

★ 迴歸 ⑨

$$y = \alpha + \beta x + u$$

$$H_0: \beta = 0$$

$$t = \frac{\hat{\beta} - 0}{\text{○} \swarrow se(\hat{\beta})}$$

★ 成對 ⑦

$$H_0: \mu_1 = \mu_2 (D = 0)$$

$$t = \frac{D - 0}{\text{○}} \sim t(n-1)$$

★ ANOVA ⑧

$$H_0: \mu_1 = \mu_2 = \mu_3$$

$$F = \text{○} \quad (\text{D 後討論})$$

⑤  $H_0: \sigma^2 = 20$

$$\chi^2 = \frac{(n-1) \frac{S^2}{20}}{\text{○}} \\ \begin{array}{l} \nearrow \text{正規化} \\ \nwarrow \text{比較 (用除數)} \end{array} \\ \sim \chi^2(n-1)$$

⑥  $H_0: \sigma_1^2 = \sigma_2^2$

$$F = \frac{S_1^2}{S_2^2} \quad \leftarrow \text{用除數} \\ \sim F(n_1-1, n_2-1)$$