

1. Menguji rata-rata

Hipotesis	Kondisi	Distribusi	Statistik	Daerah Ho
$H_0: \mu = \mu_0$ $H_1: \mu \neq \mu_0$	σ diketahui	Normal	$Z = \frac{\bar{x} - \mu_0}{\sigma / \sqrt{n}}$	Terima $-Z_{\frac{1}{2}(1-\alpha)} < Z < Z_{\frac{1}{2}(1-\alpha)}$
	σ tidak diketahui	Student	$t = \frac{\bar{x} - \mu_0}{s / \sqrt{n}}$	Terima $-t_{1-\frac{1}{2}\alpha} < t < t_{1-\frac{1}{2}\alpha}$ dk = (n - 1)
$H_0: \mu = \mu_0$ $H_1: \mu > \mu_0$	σ diketahui	Normal	$Z = \frac{\bar{x} - \mu_0}{\sigma / \sqrt{n}}$	Tolak $Z \geq Z_{0,5-\alpha}$
	σ tidak diketahui	Student	$t = \frac{\bar{x} - \mu_0}{s / \sqrt{n}}$	Tolak $t \geq t_{1-\alpha}$ dk = (n - 1)
$H_0: \mu = \mu_0$ $H_1: \mu < \mu_0$	σ diketahui	Normal	$Z = \frac{\bar{x} - \mu_0}{\sigma / \sqrt{n}}$	Tolak $Z \leq -Z_{0,5-\alpha}$
	σ tidak diketahui	Student	$t = \frac{\bar{x} - \mu_0}{s / \sqrt{n}}$	Tolak $t \leq -t_{1-\alpha}$ dk = (n - 1)

2. Menguji proporsi

Hipotesis	Distribusi	Statistik	Daerah Ho
$H_0: \pi = \pi_0$ $H_1: \pi \neq \pi_0$	Normal	$Z = \frac{\frac{x}{n} - \pi_0}{\sqrt{\frac{\pi_0(1-\pi_0)}{n}}}$	Terima $-Z_{\frac{1}{2}(1-\alpha)} < Z < Z_{\frac{1}{2}(1-\alpha)}$
$H_0: \pi = \pi_0$ $H_1: \pi > \pi_0$	Normal	$Z = \frac{\frac{x}{n} - \pi_0}{\sqrt{\frac{\pi_0(1-\pi_0)}{n}}}$	Tolak $Z \geq Z_{0,5-\alpha}$
$H_0: \pi = \pi_0$ $H_1: \pi < \pi_0$	Normal	$Z = \frac{\frac{x}{n} - \pi_0}{\sqrt{\frac{\pi_0(1-\pi_0)}{n}}}$	Tolak $Z \leq -Z_{0,5-\alpha}$

3. Menguji varians

Hipotesis	Distribusi	Statistik	Daerah Ho
$H_0: \sigma^2 = \sigma_0^2$ $H_1: \sigma^2 \neq \sigma_0^2$	Chi-kuadrat	$\chi^2 = \frac{(n-1)s^2}{\sigma_0^2}$	Terima $\chi_{1/2\alpha}^2 < \chi^2 < \chi_{1-1/2\alpha}^2$ dk = (n - 1)
$H_0: \sigma^2 = \sigma_0^2$ $H_1: \sigma^2 > \sigma_0^2$	Chi-kuadrat	$\chi^2 = \frac{(n-1)s^2}{\sigma_0^2}$	Tolak $\chi^2 \geq \chi_{1-\alpha}^2$ dk = n-1
$H_0: \sigma^2 = \sigma_0^2$ $H_1: \sigma^2 < \sigma_0^2$	Chi-kuadrat	$\chi^2 = \frac{(n-1)s^2}{\sigma_0^2}$	Tolak $\chi^2 \leq \chi_{\alpha}^2$ dk = n-1

4. Menguji kesamaan dua rata-rata

Hipotesis	Kondisi	Distribusi	Statistik	Daerah Ho
$H_0: \mu_1 = \mu_2$ $H_1: \mu_1 \neq \mu_2$	$\sigma_1 = \sigma_2 = \sigma$	Normal	$Z = \frac{\bar{x}_1 - \bar{x}_2}{\sigma \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$	Terima $-Z_{\frac{1}{2}(1-\alpha)} < Z < Z_{\frac{1}{2}(1-\alpha)}$
	$\sigma_1 = \sigma_2 = s^2$	Student	$t = \frac{\bar{x}_1 - \bar{x}_2}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$	Terima $-t_{1-\frac{1}{2}\alpha} < t < t_{1-\frac{1}{2}\alpha}$ $dk = n_1 + n_2 - 2$
	$\sigma_1 \neq \sigma_2$	Student	$t' = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$	Terima $-\frac{w_1 t_1 + w_2 t_2}{w_1 + w_2} < t' < \frac{w_1 t_1 + w_2 t_2}{w_1 + w_2}$ $w_i = s_i^2 / n_i$ $t_i = t_{(1-\frac{1}{2}\alpha), (n_i-1)}$
$H_0: \mu_1 = \mu_2$ $H_1: \mu_1 > \mu_2$	$\sigma_1 = \sigma_2 = s^2$	Student	$t = \frac{\bar{x}_1 - \bar{x}_2}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$	Tolak $t \geq t_{1-\alpha}$ $dk = n_1 + n_2 - 2$
	$\sigma_1 \neq \sigma_2$	Student	$t' = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$	Tolak $t' \geq \frac{w_1 t_1 + w_2 t_2}{w_1 + w_2}$ $w_i = s_i^2 / n_i$ $t_i = t_{(1-\frac{1}{2}\alpha), (n_i-1)}$
$H_0: \mu_1 = \mu_2$ $H_1: \mu_1 < \mu_2$	$\sigma_1 = \sigma_2 = s^2$	Student	$t = \frac{\bar{x}_1 - \bar{x}_2}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$	Tolak $t \leq -t_{1-\alpha}$ $dk = n_1 + n_2 - 2$
	$\sigma_1 \neq \sigma_2$	Student	$t' = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$	Tolak $t' \leq -\frac{w_1 t_1 + w_2 t_2}{w_1 + w_2}$ $w_i = s_i^2 / n_i$ $t_i = t_{(1-\frac{1}{2}\alpha), (n_i-1)}$

$$s^2 = \frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}$$

5. Menguji kesamaan dua hipotesis

Hipotesis	Distribusi	Statistik	Daerah Ho
$H_0: \pi_1 = \pi_2$ $H_1: \pi_1 \neq \pi_2$	Normal	$Z = \frac{\left(\frac{x_1}{n_1}\right) - \left(\frac{x_2}{n_2}\right)}{\sqrt{pq\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$	Terima $-Z_{\frac{1}{2}(1-\alpha)} < Z < Z_{\frac{1}{2}(1-\alpha)}$
$H_0: \pi_1 = \pi_2$ $H_1: \pi_1 > \pi_2$	Normal	$Z = \frac{\left(\frac{x_1}{n_1}\right) - \left(\frac{x_2}{n_2}\right)}{\sqrt{pq\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$	Tolak $Z \geq Z_{0,5-\alpha}$
$H_0: \pi_1 = \pi_2$ $H_1: \pi_1 < \pi_2$	Normal	$Z = \frac{\left(\frac{x_1}{n_1}\right) - \left(\frac{x_2}{n_2}\right)}{\sqrt{pq\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$	Tolak $Z \leq -Z_{0,5-\alpha}$

6. Menguji kesamaan dua varians

Hipotesis	Distribusi	Statistik	Daerah Ho
$H_0: \sigma_1^2 = \sigma_2^2$ $H_1: \sigma_1^2 \neq \sigma_2^2$	F	$F = \frac{s_1^2}{s_2^2}$	Terima $F_{(1-\frac{1}{2}\alpha)(n_1-1, n_2-1)} < F < F_{\frac{1}{2}\alpha(n_1-1, n_2-1)}$
$H_0: \sigma_1^2 = \sigma_2^2$ $H_1: \sigma_1^2 \neq \sigma_2^2$	F	$F = \frac{s_1^2}{s_2^2}$	Tolak $F \geq F_{\alpha, (n_1-1, n_2-1)}$
$H_0: \sigma_1^2 = \sigma_2^2$ $H_1: \sigma_1^2 \neq \sigma_2^2$	F	$F = \frac{s_1^2}{s_2^2}$	Tolak $F \leq F_{(1-\alpha)(n_1-1, n_2-1)}$