Oppsummering: To populasjoner

$(1-\alpha)\cdot 100\%$ konfidensintervall for $\mu_1 - \mu_2$:

1) σ_1 og σ_2 kjent (normal-pop. el. n_1 og $n_2 \geq 30$)

$$\left(\bar{x}_1 - \bar{x}_2 - z_{\frac{\alpha}{2}} \sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}} \, , \, \bar{x}_1 - \bar{x}_2 + z_{\frac{\alpha}{2}} \sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}} \right)$$

2) $\sigma_1 = \sigma_2$ ukjent (normal-pop.)

$$\left(\bar{x}_1 - \bar{x}_2 - t_{\frac{\alpha}{2}} s_p \sqrt{\frac{1}{n_1} + \frac{1}{n_2}} \, , \, \bar{x}_1 - \bar{x}_2 + t_{\frac{\alpha}{2}} s_p \sqrt{\frac{1}{n_1} + \frac{1}{n_2}} \right)$$

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

$t_{\frac{\alpha}{2}}$ fra t-ford. med $n_1 + n_2 - 2$ frihetsgr.

3) $\sigma_1 \neq \sigma_2$, ukjente (normal-pop.)

$$\left(\bar{x}_1 - \bar{x}_2 - t_{\frac{\alpha}{2}} \sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}} \, , \, \bar{x}_1 - \bar{x}_2 + t_{\frac{\alpha}{2}} \sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}} \right)$$

$t_{\frac{\alpha}{2}}$ fra t-ford. med $v = v(s_1, s_2, n_1, n_2)$ frihetsgr.

$$v = \frac{\left(s_1^2/n_1 + s_2^2/n_2 \right)^2}{\frac{1}{n_1 - 1} \left(\frac{s_1^2}{n_1} \right)^2 + \frac{1}{n_2 - 1} \left(\frac{s_2^2}{n_2} \right)^2}$$