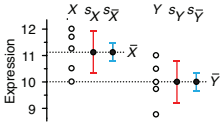


**b**Two-sample  $t$ -test

$$t = \frac{(\bar{X} - \bar{Y}) - (\mu_1 - \mu_2)}{s_{\bar{X} - \bar{Y}}}$$

$$s_{\bar{X} - \bar{Y}}^2 = s_{\bar{X}}^2 + s_{\bar{Y}}^2$$

$$\approx s_p^2/n + s_p^2/m$$