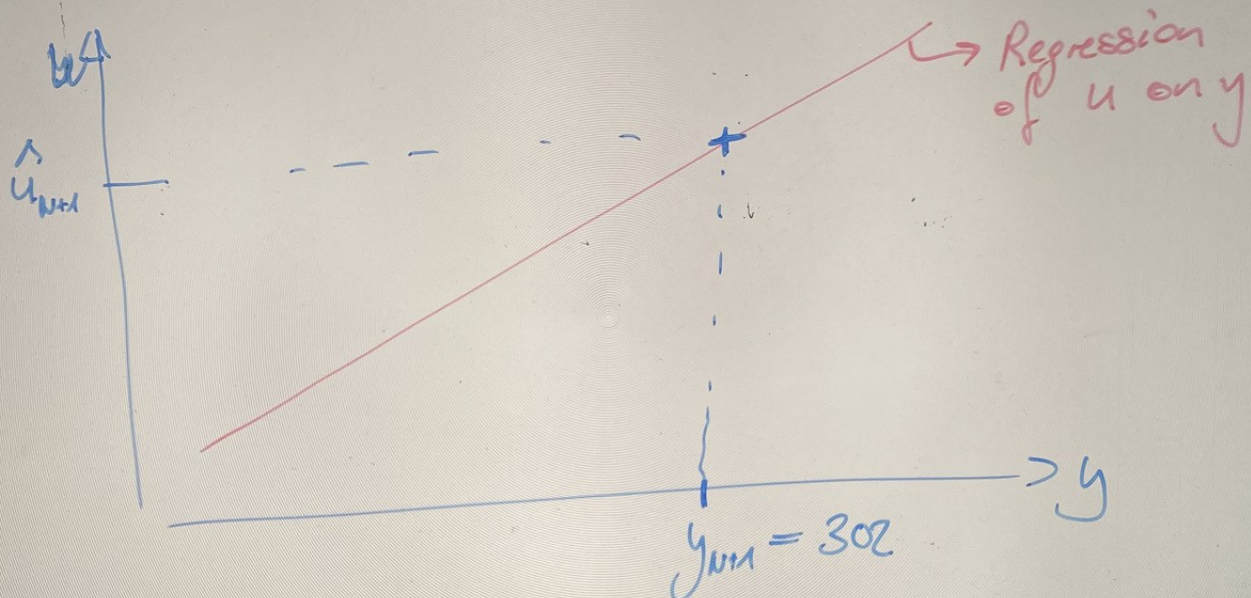


□ Let us assume:

- phenotypic observation  $y_{N+1}$
- unknown  $u_{N+1}$
- Predict  $u_{N+1}$  based on  $y_{N+1}$



$$\hat{u}_{N+1} = b(y_{N+1} - \mu)$$

Quality of prediction:

• Accuracy:  $r_{uy} = \frac{\text{cov}(u, y)}{\sigma_u \sigma_y} = \frac{\text{var}(u)}{\sigma_u \sigma_y}$

$$= \frac{\sigma_u^2}{\sigma_u \sigma_y} = \frac{\sigma_u}{\sigma_y} = h = \sqrt{h^2}$$