$$Y = A \cdot K^{\alpha} L^{1-\alpha}$$

$$0 < \alpha < 1$$

$$\Rightarrow$$

$$\frac{Y}{L} = A \cdot K^{\alpha} \cdot L^{-\alpha}$$

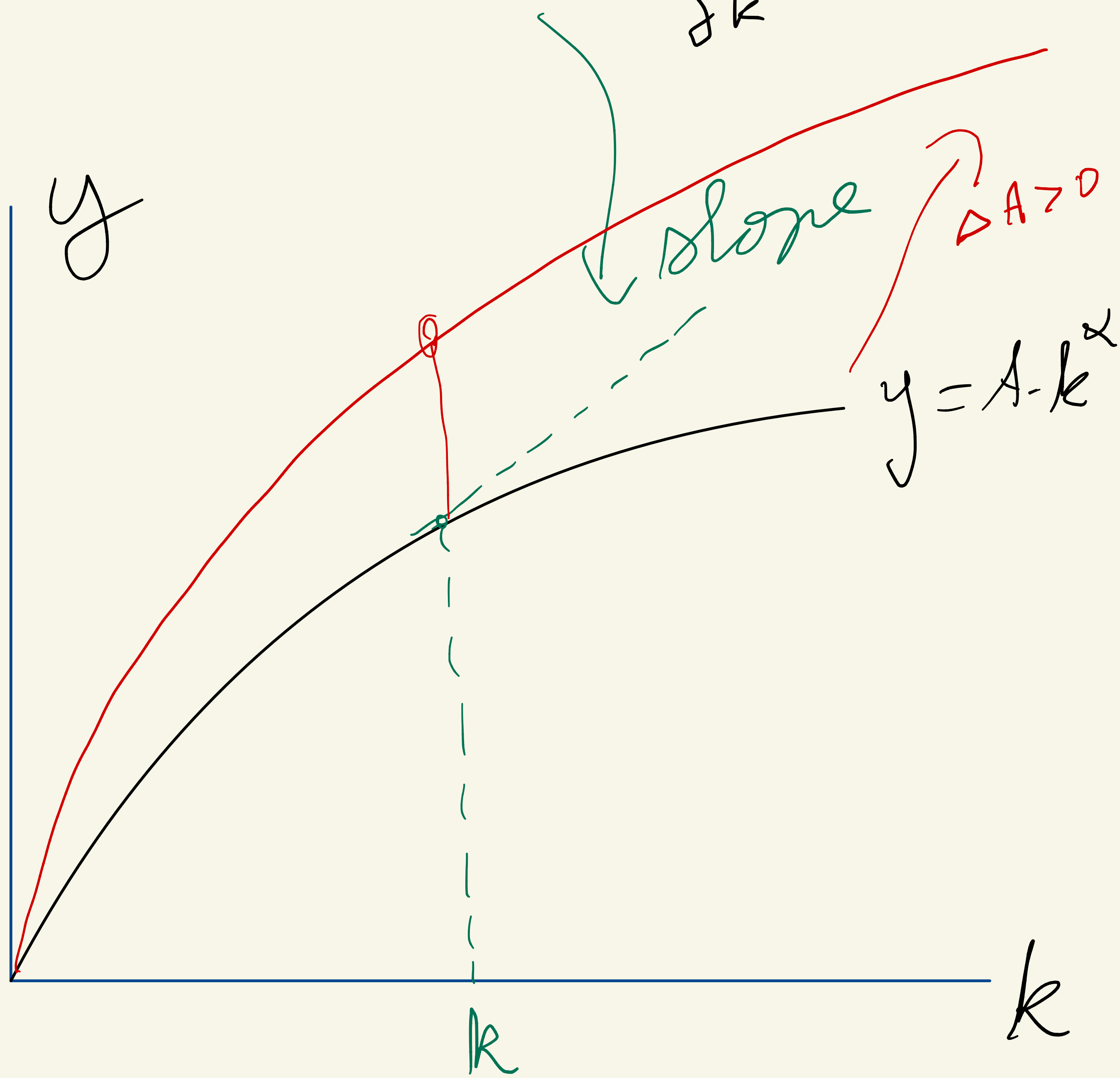
$$\Rightarrow$$

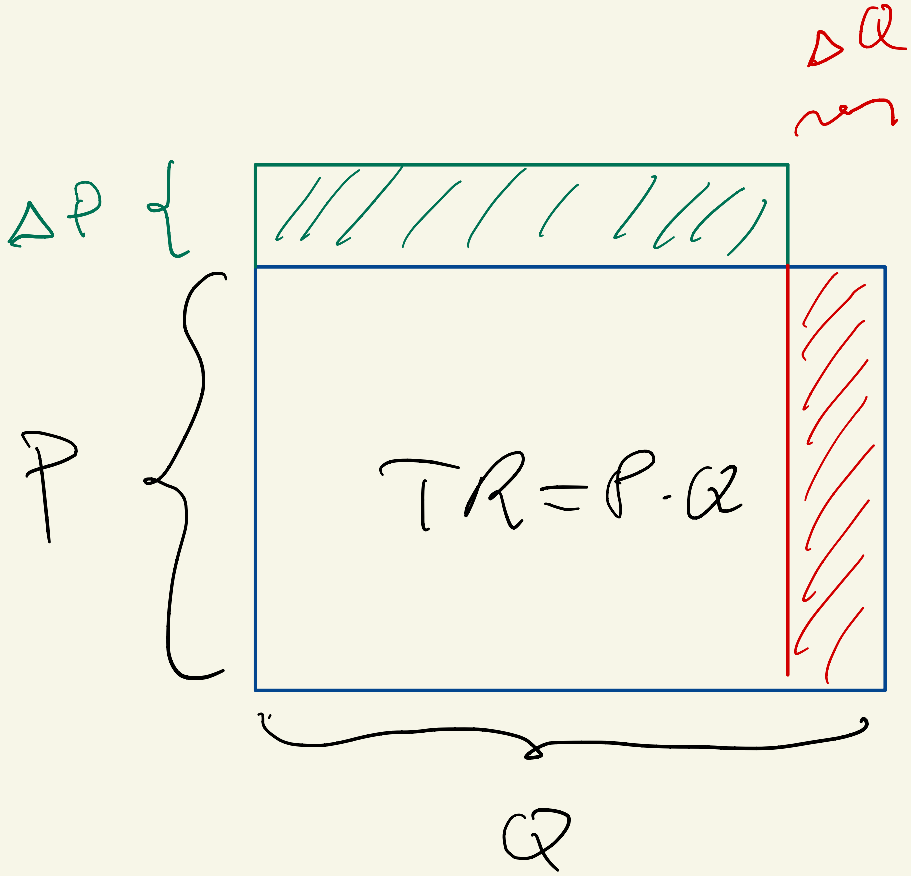
$$y = A \cdot \left(\frac{K}{L}\right)^{\alpha} = A \cdot k^{\alpha}$$

$$\Rightarrow$$

$$y = A \cdot k^{\alpha}$$

$$MPK = \frac{dy}{dk} = \alpha \cdot A k^{\alpha - 1}$$





$$\Delta TR = \Delta P \cdot Q + P \cdot \Delta Q$$

$$\Longrightarrow$$

$$\frac{\Delta TR}{\Delta Q} = P \cdot \left[\underbrace{\frac{\Delta P}{P} \cdot \frac{Q}{\Delta Q}}_{= \frac{1}{\varepsilon}} + 1 \right]$$

$$= P \cdot \left[1 + \frac{1}{\varepsilon} \right]$$

$$TR = (P - C) \cdot Q$$

$$\frac{\Delta TR}{\Delta Q} = \Delta P \cdot \frac{Q}{\Delta Q} + (P - C) \cdot \cancel{\Delta Q}$$

$$= P \cdot \left[\underbrace{\frac{\Delta P}{P} \cdot \frac{Q}{\Delta Q}}_{= \frac{1}{\varepsilon}} + \underbrace{\frac{P - C}{P}} \right]$$

Optimum:

$$\frac{P - C}{P} = -\frac{1}{\varepsilon}$$