

Sensitivity

$$Ax = b \quad \leadsto \quad \boxed{x^* \text{ is optimal}}$$

$$Ax = b' \quad \leadsto \quad \text{How far away is a } \boxed{\text{closest opt sol. } x^{*'}}?$$

$$\|x^* - x^{*'}\|_{\infty} \stackrel{?}{\leq} \text{poly}(m) \cdot \|b - b'\|_1$$

- Either Large Example
- Or proof smallness

Proximity

$$Ax = b: \text{Distance from } \boxed{\text{LP sol.}} \text{ to } \boxed{\text{LP sol.}}$$

$$\|x - z\|_{\infty} \stackrel{?}{\leq} \text{poly}(m)$$

- Either Large Example
- Or proof smallness