

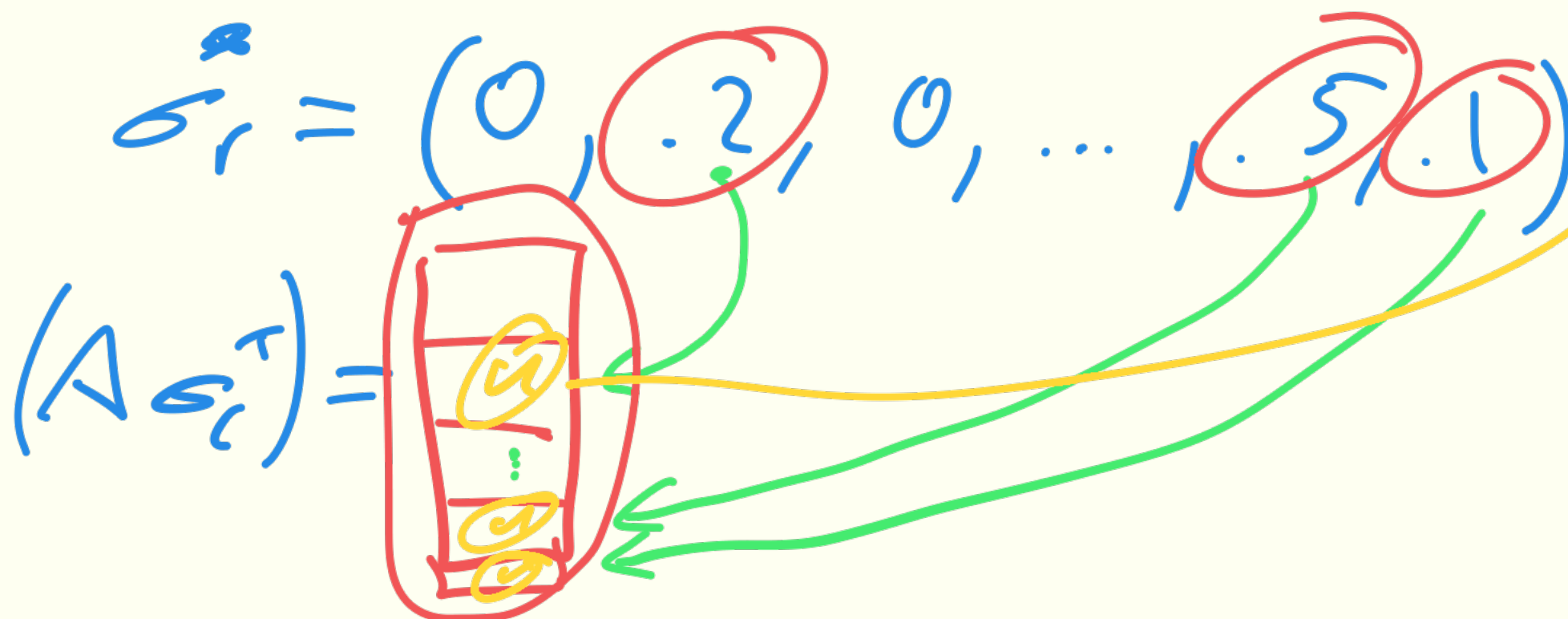
Best response condition

σ_r^* is a b.r. to c_r iff:

$$\sigma_{r,i}^* > 0 \Rightarrow (A\sigma_c^*)_i = \max_k (A\sigma_c^*)_k$$

$$\sigma_r^* = (0, .2, 0, \dots, .5, .1)$$

$$(A\sigma_c^*) = \begin{pmatrix} .4 \\ .2 \\ .3 \end{pmatrix}$$



$$\sigma, A\sigma_c^T = \sum_{i=1}^m \sigma_{r_i} \underbrace{(A\sigma_c^T)_i}_{\text{circled}}$$

Let $u = \max_k (A\sigma_c^T)_k$

$$\sigma, A\sigma_c^T = \sum_{i=1}^m \sigma_{r_i} (u - u + (A\sigma_c^T)_i)$$

$$= \sum_{i=1}^m \sigma_{r_i} u - \sum_{i=1}^m \sigma_{r_i} (u - (A\sigma_c^T)_i)$$

$$\underbrace{\sigma, A\sigma_c^T}_{\text{double arrow}} = u - \sum_{i=1}^m \underbrace{\sigma_{r_i}}_{\text{circled}} \underbrace{(u - (A\sigma_c^T)_i)}_{\text{circled, with } \geq 0 \text{ above it}}$$