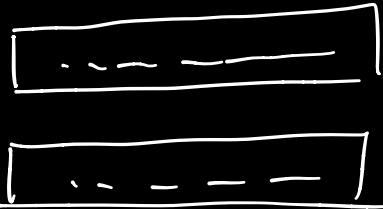
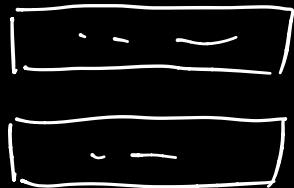


Stable Marriage Optimal



$$M \xrightarrow{w > w^*} W : M^+ > M$$

$$w > w^* : M^+ \xrightarrow{M^+ > M} w^*$$



$$w : \quad \quad \quad M$$

$$t : \underbrace{M^+ \text{ propose to } W}_{\text{First:}} .$$

$$W : M^+ > M$$

$$w^* : M^* < M^+$$

$$(w^-, M^-)$$

$$T : (w, M)$$

$$S : (w, M^-)$$

$$(M, w^*)$$

$$w : M > M^-$$

$$M : w > w^*$$

$$T : \underline{(w, M)}$$

$$\cancel{S! \quad \underline{(w, M^-)} \quad X}$$

$$(M, w^*)$$

$$w : M^- < M$$

$$M : \square < w$$

Contradiction
in S .

$T: (W, M^+)$

$W: M^+ > M$

Assume:

$$W: \boxed{m^+ \quad M}$$

$$M^+: \boxed{w^+ \quad w}$$

$$\begin{aligned} M^+ : & \frac{W > W^+}{M^+, w^+} \\ \end{aligned} \quad \left. \right\} ?$$

| contradiction
in T .