Econ 501B HW 1

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Question 1: *True or False.* Fix an environment $(T, B; (\succsim)_{t\in T}, (\succsim)_{b\in B})$ so the following holds:

There exists $t_* \in T$ and $b_* \in B$, with:

(1) $b_* \succ_{t_*} b$ for each $b \in B \setminus \{b_*\}$, and
(2) $t_* \succ_{b_*} t$ for each $t \in T \setminus \{t_*\}$.

Then, in any stable match $\mu : (T \cup B) \to (T \cup B), \mu(t_*) = b_*$

By contraposition show that: $\mu : (T \cup B) \to (T \cup B), \mu(t_*) \neq b_*$

Implies the following:

(1) $b_* \succ_{t_*} b$ for each $b \in B \setminus \{b_*\}$, and
(2) $t_* \succ_{b_*} t$ for each $t \in T \setminus \{t_*\}$.