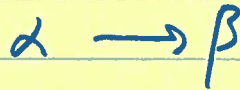


Homework #4

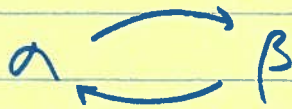
I. Exercises.

Calculate all complete extensions for each of these graphs (= argument frameworks). Which are grounded, preferred, stable?

A.



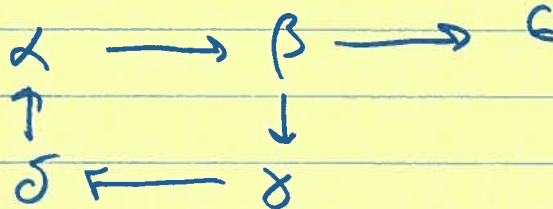
B.



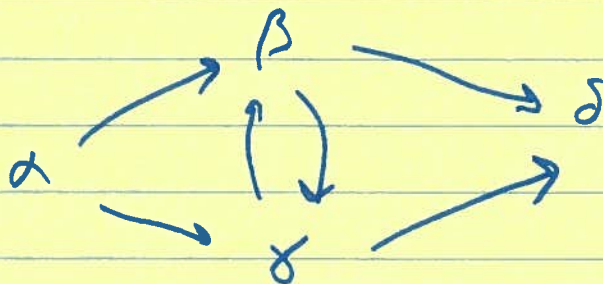
C.

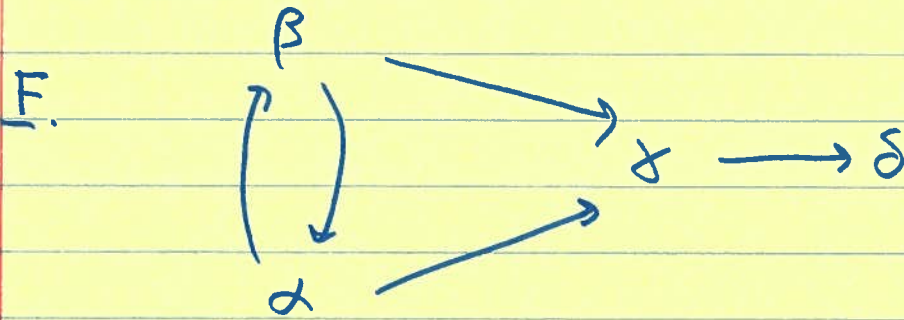


D.



E.





II Questions.

A. Is the grounded extension of a graph the intersection of its preferred extensions?

B. Exhibit a graph with a preferred extension but not a stable extension.

C. If we define

$$F(\Gamma) = \{ \alpha : \Gamma \text{ defends } \alpha \}$$

$$G(\Gamma) = \{ \alpha : \neg (\Gamma \rightarrow \alpha) \}$$

show:

$$(i) \Gamma \subseteq \Gamma' \Rightarrow F(\Gamma) \subseteq F(\Gamma')$$

$$(ii) \Gamma \subseteq \Gamma' \Rightarrow G(\Gamma') \subseteq G(\Gamma)$$

(iii) $G(\Delta) = F(\phi)$, where $\Delta =$ all arguments

(iv) $F(\Gamma) = G(G(\Gamma))$

(v) $\Gamma = F(\Gamma) \Rightarrow \Gamma \subseteq G(\Gamma)$

(vi) Γ stable $\Leftrightarrow \Gamma = G(\Gamma)$

D. Show that any stable extension is preferred.