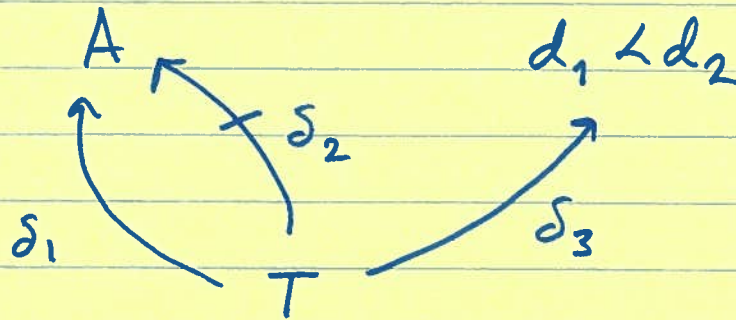


# Homework #3

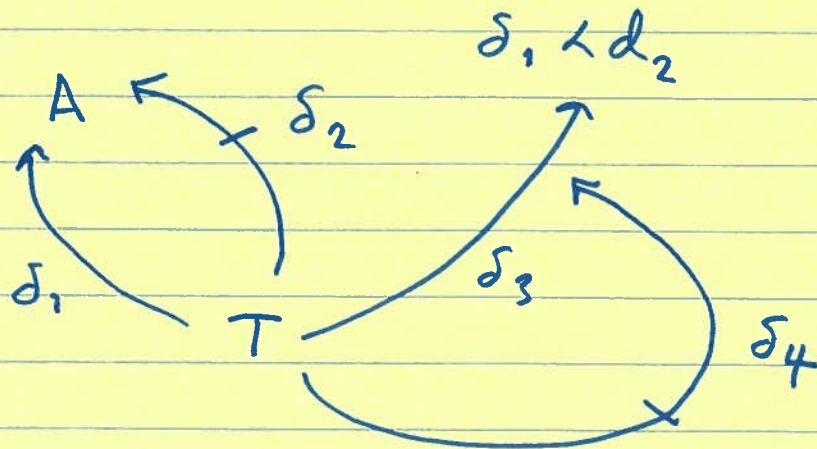
## I. Exercises.

① Construct all proper scenarios for the default theories depicted in the following diagrams:

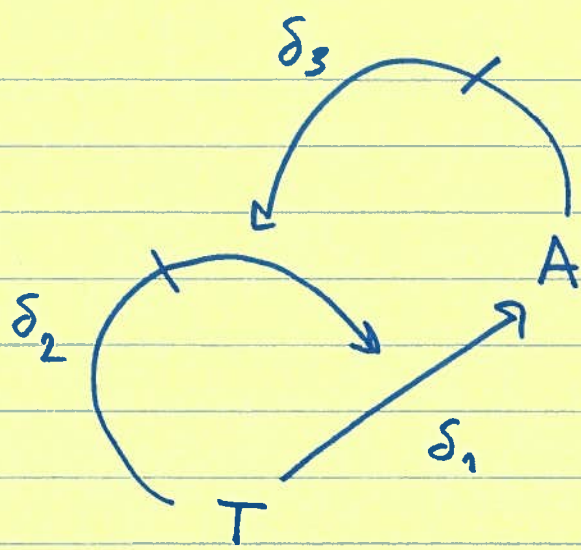
A.



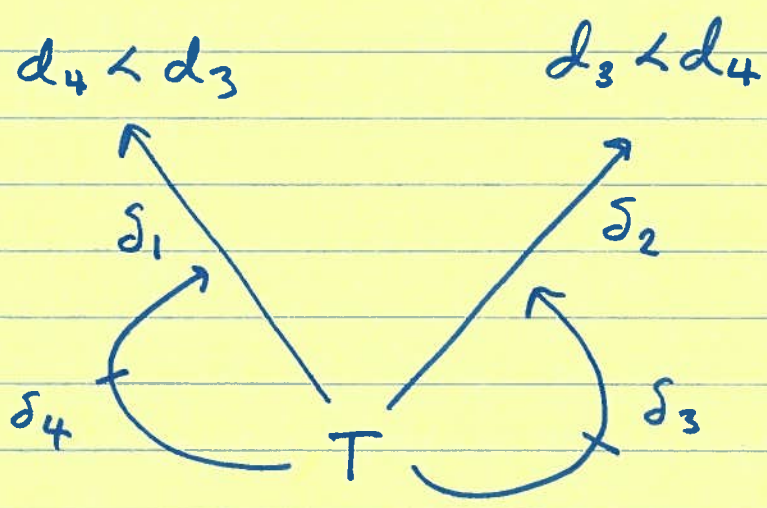
B.



C.



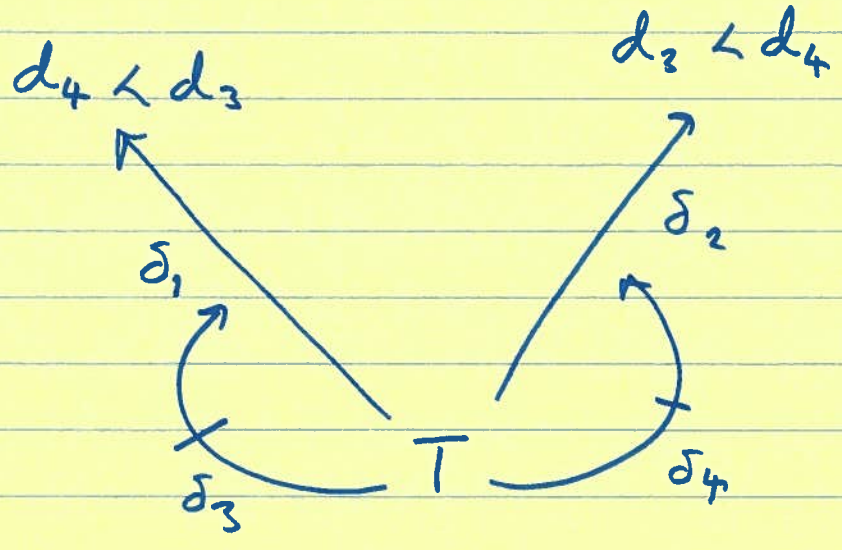
D.



$$W = \{ \neg (\text{Out}(d_1) \wedge \text{Out}(d_2)) \}$$

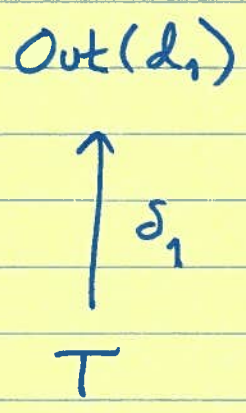


E.

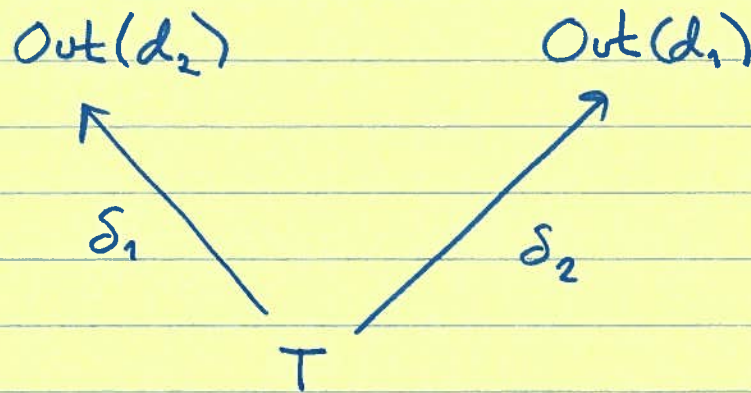


$$W = \{ \neg (\text{Out}(d_1) \wedge \text{Out}(d_2)) \}$$

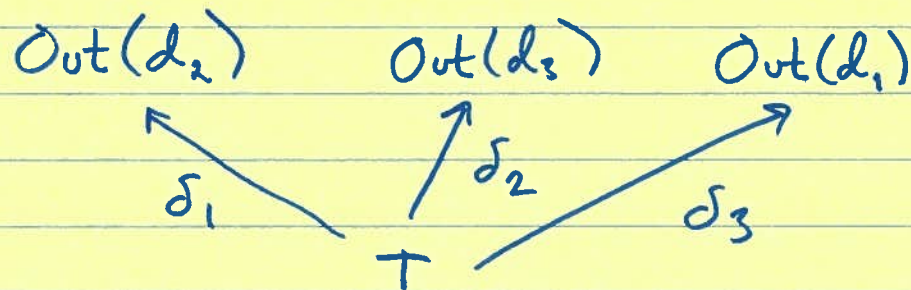
F.



G.



H.



## II Problems.

① Verify or find counterexamples:

A.  $\Delta K_s A \ \& \ \Delta K_s B \Rightarrow \Delta K_s A \wedge B$

B.  $\Delta K_c A \ \& \ \Delta K_c B \Rightarrow \Delta K_c A \wedge B$



C.  $\Delta[A] \models C \ \& \ \Delta[B] \models C$

$\Rightarrow \Delta[A \vee B] \models C$

D.  $\Delta[A] \models \neg B \Rightarrow \Delta[B] \models \neg A$

E.  $\Delta \models A \ \& \ \Delta \models B \ \Delta \models B$

$\Rightarrow \Delta[A] \models B \ \cancel{\Rightarrow \Delta \models B}$

(2) Is the union of any two distinct extensions of a ~~variable~~ priority default theory inconsistent ?? fixed