

Q 3.2 : ^{consider first} **2-cycle** :

partial stable model
undefined

3-cycle :

total stable
total stable

AFP Comp: $J_0: w_1(a), w_1(b), w_1(c)$ false
 $J_1: w_1(a), w_1(b), w_1(c)$ true
 $J_2: w_1(a), w_1(b), w_1(c)$ false = J_0

\Rightarrow AFP from Rod \Rightarrow
 \Rightarrow Well founded model \rightarrow partial stable model
 $w_1(a), w_1(b), w_1(c)$ undefined
 \rightarrow Partial stable models?
 \rightarrow no total stable model,
 \Rightarrow W the only stable model

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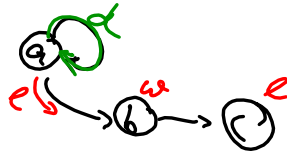
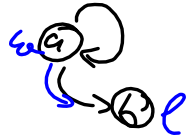
Consider

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minimal example :

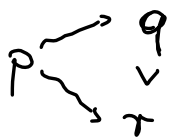


only one (partial) stable model.
no total stable model.



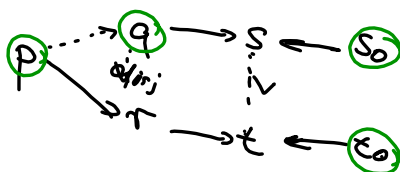
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Ex 3.1: consider partitioning of a set of objects
"classes": p, q, r, s, t, \dots "classification" using predicates $p(x), q(x), \dots$



p 's are q 's or r 's
normal p 's are r 's

$$\tau(x) :- p(x), \neg q(x).$$

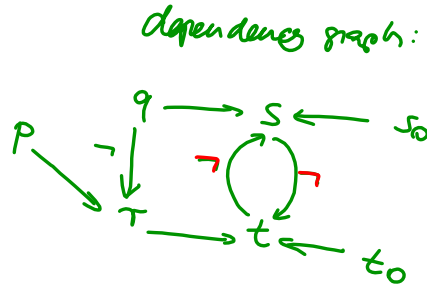


green: EAP

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EDB: $P/A, q/A, s/A, t/A$

$\tau(x) :- p(x), \neg q(x).$
 $s(x) :- s_0(x).$
 $t(x) :- t_0(x).$
 $s(x) :- q(x), \neg t(x).$
 $t(x) :- \tau(x), \neg s(x).$



\Rightarrow only total stable models:
 for every object σ , it can be classified

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Ex 34: look at w (\Rightarrow) ("guessed" part of a stable model)

✓	w b/c	part of the well-founded model (near dead end)
-----	d w	correct, but "unfounded" guess
✗	f w	obviously false guess (dead end)
	c ✗	incorrect guess

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