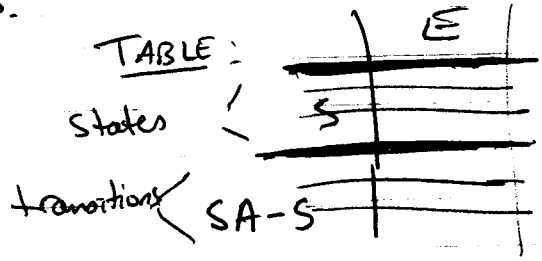
Learning with reset:

S = set of strings : you know all states $\delta(q_0, s_i)$ are different for $s_i \in S$.

E = set of experiments use to distinguish them.

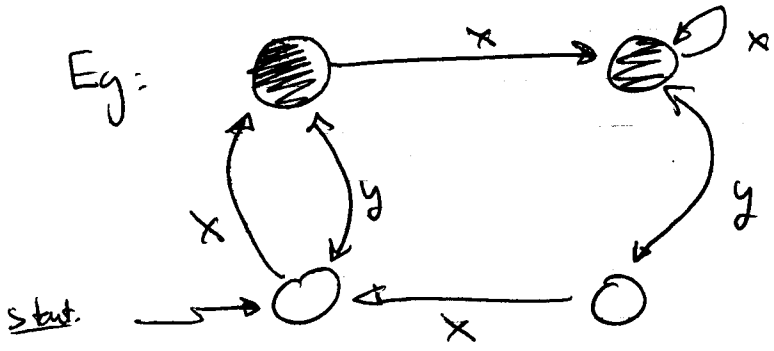
(do S, then E)

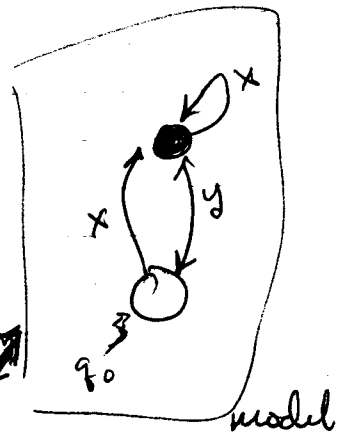
TABLE:



	x	yx	xxx
λ	+	−	+
xx	+	+	−
xy	−	−	+

Eg:





initially

	λ
λ	□
x	■
y	■

→

	λ
λ	□
x	■
y	■
xx	■
xy	□

maintain closure: For all $s \in SA$, there exists $s' \in S$ such that $row(s) = row(s')$

Now, query for counterexample. Get $z = xxyx$ (see D, predict ■)

→ you know some edge is wrong, but which one? Want to add new expt.

IDEA: look at all ways to split z into prefix, suffix:

p_i	r_i
λ	xxyx
x	xyx
xx	yx
xxy	x
xxyx	λ

now, replace prefixes with predicted states (in S)

α_i	r_i	observations
λ	xxyx	□
x	xyx	□
x	yx	■
λ	x	■
x	λ	■

these are in S

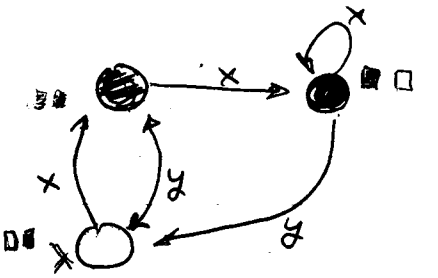
Now, find adjacent pair whose observation differ.

→ yx is expt.
→ tells you $x \neq xx$

New table:

	λ	yx
λ	□	■
x	■	■
xx	■	□
y	■	■
xy	□	■
xxx	■	□
xxy	□	■

← xyx

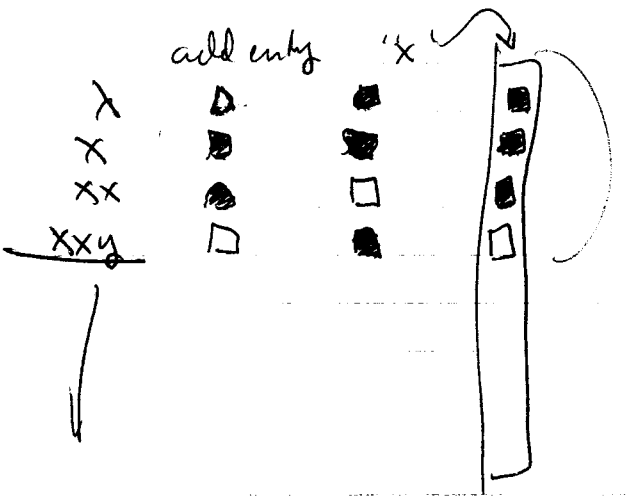


↑ not really consistent: xx → yx says □
xxy → x ~~says~~ λx → x says ■

Counter ex → xxyx again.
(or can try memory).

α_i	r_i	
λ	xxyx	□
x	xyx	□
xx	yx	■
xxy	x	■
x	λ	■

} expt "x" distinguishes xxy from λ



n rows in table (top part), n × |A| at most rows in bottom.
expts ≤ n since each distinguishes new

→ $n^2(|A|+1)$ MQs, n EQs.

$+(\log m)E$ for finding next expt.
↑ length of C.E.