

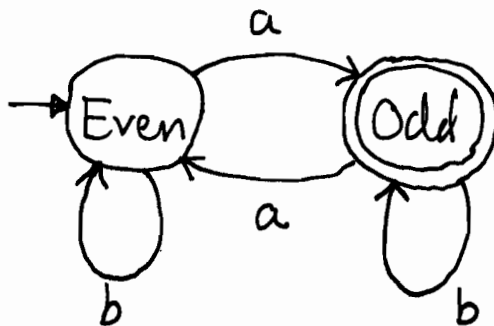
CST IA 2001  
p2, q1d

AMP

### Regular Languages and Finite Automata

Draw a picture of a deterministic finite automaton with set of input symbols  $\{a, b\}$  whose language of accepted strings consists of all strings containing an odd number of occurrences of the symbol  $a$ . [4 marks]

Answer:



- 1 mark if all the ingredients of a DFA are drawn.
- 2 marks if the DFA drawn has correct language.
- 1 mark for some indication why the solution is correct (eg. labelling states with names indicating invariant properties, as above).