H(b) Argue that for any x, the minimal deterministic finite automaton for **suf x has exactly $|x| + 1$ states.

**H51. (Greibach) Let M be an NFA, $A = L(M)$. Starting with M, do the following:

(a) reverse the transitions and interchange start and final states to get an NFA for **rev** A;

(b) determinize the resulting NFA by the subset construction, omitting inaccessible states;

(c) do the above two steps again.

Prove that the resulting automaton is the minimal DFA for A.

52. For each of the following finite automata:

(i) Give an equivalent minimal deterministic finite automaton. Don't forget to remove inaccessible states.

(ii) Give an equivalent regular expression.

(a)

		a	b
→	$1F$	2	5
	$2F$	1	4
	3	7	2
	4	5	7
	5	4	3
	6	3	6
	7	3	1

(b)

		a	b
→	$1F$	2	6
	$2F$	1	7
	3	5	2
	4	2	3
	5	3	1
	6	7	3
	7	6	5

(c)

		a	b
→	1	1	3
	$2F$	6	3
	3	5	7
	$4F$	6	1
	5	1	7
	$6F$	2	7
	7	5	3

(d)

		a	b
→	$1F$	2	5
	$2F$	1	6
	3	4	3
	4	7	1
	5	6	7
	6	5	4
	7	4	2