from the 2nd ed Sipser text:


2. exercise 1.16 (1st edition: 1.12, 3rd edition: 1.16)


4. Here we view a string $w$ over the alphabet $\{0,1,2\}$ as representing an integer in base three. Give a DFA which accepts $w$ iff $(w \mod 5) = 0$.

5. Convert the NFA below to a DFA. It accepts the language over $\{a,b\}$ of all strings that contain abba.