

1. Which of the following is **not** a valid property of a finite automaton?

(3 points)

- A. It may accept many strings but only recognizes one language.
- B. It must read all the input symbols provided.
- C. After reading each symbol, the machine moves to another state or remains in the current state.
- ✓ D. It may terminate without accepting or rejecting the input string.

2. For the FA given by the 5-tuple $(Q, \Sigma, \delta, q_0, F)$, which of the following is the correct domain for the transition function δ ?

(3 points)

A. Q

✓ B. $Q \times \Sigma$

C. Σ

D. $Q \times F$

3. Assuming that the language recognized by a DFA **is not empty**, how many accept states can a DFA have?

(3 points)

A. only one

B. an infinite number

✓ C. one or more (but a finite number)

D. none of the above