

Theory Of Automata

Home Task # 1



- 1) The language L of strings of odd length, defined over $\Sigma = \{a,b\}$, can be written as:

$$L = \{a, b, aaa, aab, aba, abb, baa, bab, bba, bbb, \dots\}$$

- 2) The language L of strings that does not start with b, defined over $\Sigma = \{a,b\}$, can be written as:

$$L = \{a, aa, ab, aaa, aab, aba, abb, \dots\}$$

- 3) The language L of strings of length 2, defined over $\Sigma = \{a,b,c\}$, can be written as:

$$L = \{a, b, c, aa, bb, cc, ab, ba, ac, ca, bc, cb\}$$

- 4) The language **EVEN**, of strings defined over $\Sigma = \{-, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9\}$, can be written as:

$$L = \{\dots, -6, -4, -2, 0, 2, 4, 6, \dots\}$$

- 5) The language $\{a^n b^n a^n\}$, of strings defined over $\Sigma = \{a,b\}$, as $\{a^n b^n a^n : n=1,2,3,\dots\}$, can be written as:

$$L = \{aba, aabbbaa, aaabbbbaaa, \dots\}$$

- 6) The language **FACTORIAL**, of strings defined over $\Sigma = \{a\}$, as $\{a^{n!} : n=1,2,3,\dots\}$, can be written as:

$$L = \{a, aa, aaaaaa, \dots\}$$