

(4)

Let L be the language

$$L = \{w \mid \text{Read in binary, the number } w \text{ is divisible by } 3\}.$$

Is L recognised by an automaton? If yes, draw an DFA/NFA for L . Otherwise justify why an automaton does not exist.

We make the convention that leading 0s do not affect the number. So the number 00011 is the same as the number 11, which is the number three.

