


Questions for EZquiz 1

- Define total function (p6)
- Define partial function (p6)
- Define graph (p8)
- What is the difference between a walk and a path? (p8)
- Define cycle (p8)
- If S is a set, what does 2^S mean? (p5)
- Let $A = \{x, y, z\}$. Write down 2^A . Solution: $\{\emptyset, \{x\}, \{y\}, \{z\}, \{xy\}, \{xz\}, \{yz\}, \{xyz\}\}$
- Example 1.5 from Linz (p10).
- Exercise 22 from Linz §1.1. Solution:  , cycles are $v_1 \rightarrow v_1$
 $v_1 \rightarrow v_2 \rightarrow v_1$
 $v_1 \rightarrow v_2 \rightarrow v_3 \rightarrow v_1$
- Define language on an alphabet Σ using (a) words, (b) mathematical notation
 Soln: (a) a set of non-empty strings of symbols in the alphabet
 (b) language $L \subseteq \Sigma^*$
- Define grammar (p21)
- Linz Example 1.12 (p23)
- What is the difference between an accepter and a transducer? (p27)
- Define dfa (p38)
- Given dfa $M = (Q, \Sigma, \delta, q_0, F)$, define $L(M)$ in math notation (p40).
 Soln: $L(M) = \{w \in \Sigma^* : \delta^*(q_0, w) \in F\}$
- Define regular language (p45)
- Exercise 2(c) from Linz §2.1