# Algorithms & Models of Computation CS/ECE 374, Fall 2020

1.1.1

Exercise solved in detail

- What is  $\Sigma^0$ ?
- ② How many elements are there in  $\Sigma^3$ ?
- How many elements are there in  $∑^n$ ?
- What is the length of the longest string in  $\Sigma$ ?
- Ooes Σ\* have strings of infinite length?
- o If |u| = 2 and |v| = 3 then what is  $|u \cdot v|$ ?
- ① Let u be an arbitrary string in  $\Sigma^*$ . What is  $\epsilon u$ ? What is  $u\epsilon$ ?
- ⑤ Is uv = vu for every  $u, v \in \Sigma^*$ ?
- ① Is (uv)w = u(vw) for every  $u, v, w \in \Sigma^*$ ?

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## THE END

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(for now)