

CSCI 301 — Math Exercises # 5

YOUR NAME HERE

Due date: Midnight, Wednesday, May 29

Use the pumping lemma to prove that each of the following languages is not regular.

1. $\{a^i b^j \mid i \geq j \geq 0\}$
2. $\{a^{4n+5} b^{3n+2} : n \geq 0\}$
3. $\{a^i b^j c^k \mid i = j \text{ or } j = k\}$