Theorem 6.6.3 (Pumping Lemma for Regular Languages)

Let L be a regular language that is accepted by a DFA M with *k* states. Let *z* be any string with $length(z) \geq k$.

Then *z* can be written *uvw* with $length(uv) \leq k$, $length(v) > 0$, and $uv^i w \in L$ for all $i \geq 0$