CSE354 Automata Assignment1

^:power function

1)Prove that 2^n<n! For every positive integer n with n>=4

→ 2^n<n!

When n=4 ==> 16<24 (Accepted)

When n>4 → 2^(n+1)<(n+1)! ==> (2^(n+1))/2^n < (n+1)!/2^n ==> 2<(n+1)!/2^n

if n==4

2<5!/(2^4) ==> 2<7.5

(Accepted)

According to method

2^n<n! For every n>=4