1. Start: N(h) = Base: N(0) =   
   Inductive Step: N(h+1) =
2. a) Diagram

   Description automatically generated  
   Q = {q0, q1, q2, q3}  
   ∑ = {0,1}  
   Start state = q0  
   Final State = q3  
     
   b)  
     
   Diagram

   Description automatically generated  
   Q = {q0, q1, q2, q3}  
   ∑ = {0,1}  
   Start state = q0  
   Final State = q3

c)  
Diagram

Description automatically generated  
Q = {q0, q1, q2}  
∑ = {0,1}  
Start state = q0  
Final State = q2



Diagram

Description automatically generated  
Q = {q0, q1, q2, q3}  
∑ = {0,1, 2}  
Start state = q0  
Final State = q3

Diagram

Description automatically generated

Q = {q0, q1, q2, q3, q4}  
∑ = {0,1}  
Start state = q0  
Final State = q2, q3