1.

Given H what is N? N=((4^(h+1))+1)/3,

Given N what is H? H=floor of log(4,3N-2)

Given M what is H? H= floor of log(4,3M+1)

Given M what is N? N=M+1

Given L what is H? H=log(4,L)

Given H what is L? L = 4^(H)

H=0, N=1, M=0, L=1

H=1, N=5, M=4, L=4

H=2, N=21, M=20, L=16

H=3, N=85, M=84, L=64

2.

Given H what is N? N=((4^H)+2)/(4-1) to ((4^H+1)+1)/(4-1)

Given H what is L? L=(4^(H-1) +1) to (4^(H))

Given M what is H? M= floor of log (4, 3M+1)

Given M what is N? N=M+1

Given N what is H? H=floor of log(4,3N-2)

Given L what is H? H=log(4,L)

3.

In T, v’s parents would be found by getting the (ceiling of (i/4)) -1

In T, v’s kids would be found by doing (i\*4 +1),(i\*4+2),(i\*4+3),(i\*4+4)

4.

See attached pics.



