1. Proof
   1. n = 0

3x5^0 = 3(5^(0+1) − 1)/4

3 = 3(5 − 1)/4

3 = 3

Therefore, we assume n = k

3(5^(k+1) - 1) + 3x(5^(k+1))

4

3(5^(k+1) - 1 + 3(5^(k+1))x4

4

3(5^(k+2) - 1

4

1. a
   1. n1= 1/1\*2 = ½
   2. n2 = 1/1\*2 + 1/2\*3 = 2/3
   3. n3 = 1/1\*2 +1/2\*3 + 1/3\*4 = ¾
   4. ………………