a)

With N = 2 and q = 3 we get these possible microstates

N1	N2
3	0
0	3
2	1
1	2

b)

With N = 3 and q = 3 we get these possible microstates

N1	N2	N3
3	0	0
0	3	0
0	0	3
2	1	0
2	0	1
1	2	0
0	2	1
1	0	2
0	1	2
1	1	1

c)

With N = 4 and q = 3 we get these possible microstates

N1	N2	N3	N4
3	0	0	0
0	3	0	0
0	0	3	0
0	0	0	3
2	1	0	0
2	0	1	0
2	0	0	1
1	2	0	0
0	2	1	0
0	2	0	1
1	0	2	0
0	1	2	0
0	0	2	1
1	0	0	2
0	1	0	2
0	0	1	2
1	1	1	0
1	1	0	1
1	0	1	1
0	1	1	1

d)

$\Omega(N,q) = \frac{(q+N-1)!}{3!(N-1)!}$