

3

Forests ($v \leq 9$)

Forests are defined as *acyclic simple graphs*. Therefore, their components are trees. In contrast to Chapter 1 the forests are arranged by number of vertices, then number of components, and isolated vertices are allowed.

$v = 1$



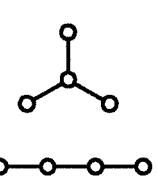
$v = 2$



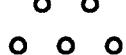
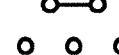
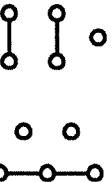
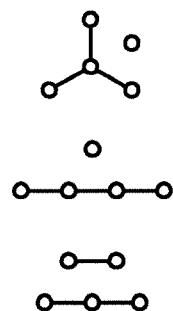
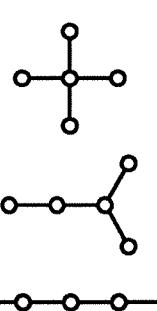
$v = 3$



$v = 4$



$v = 5$



$\omega = 1$

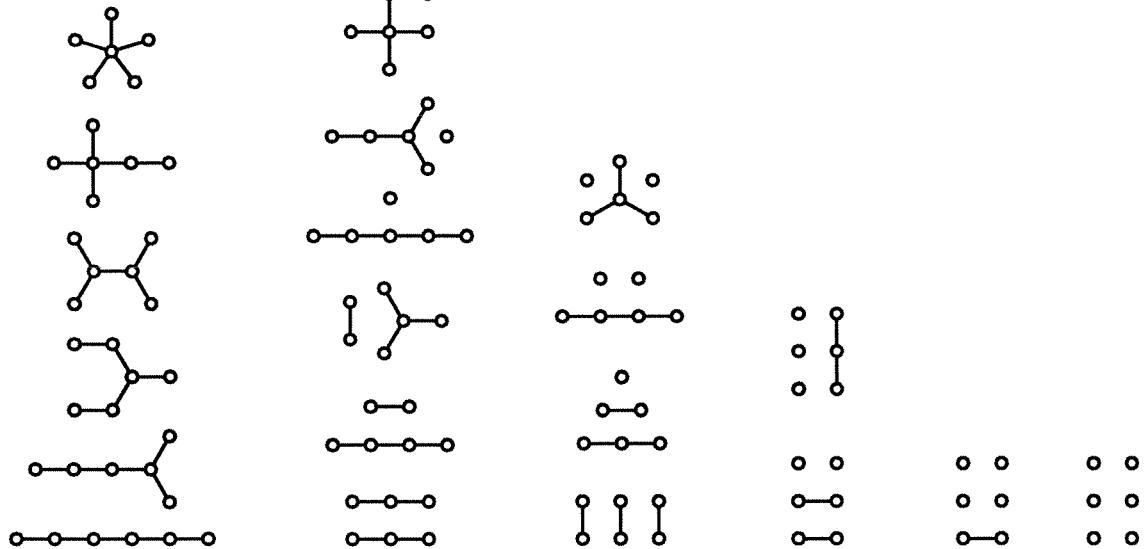
$\omega = 2$

$\omega = 3$

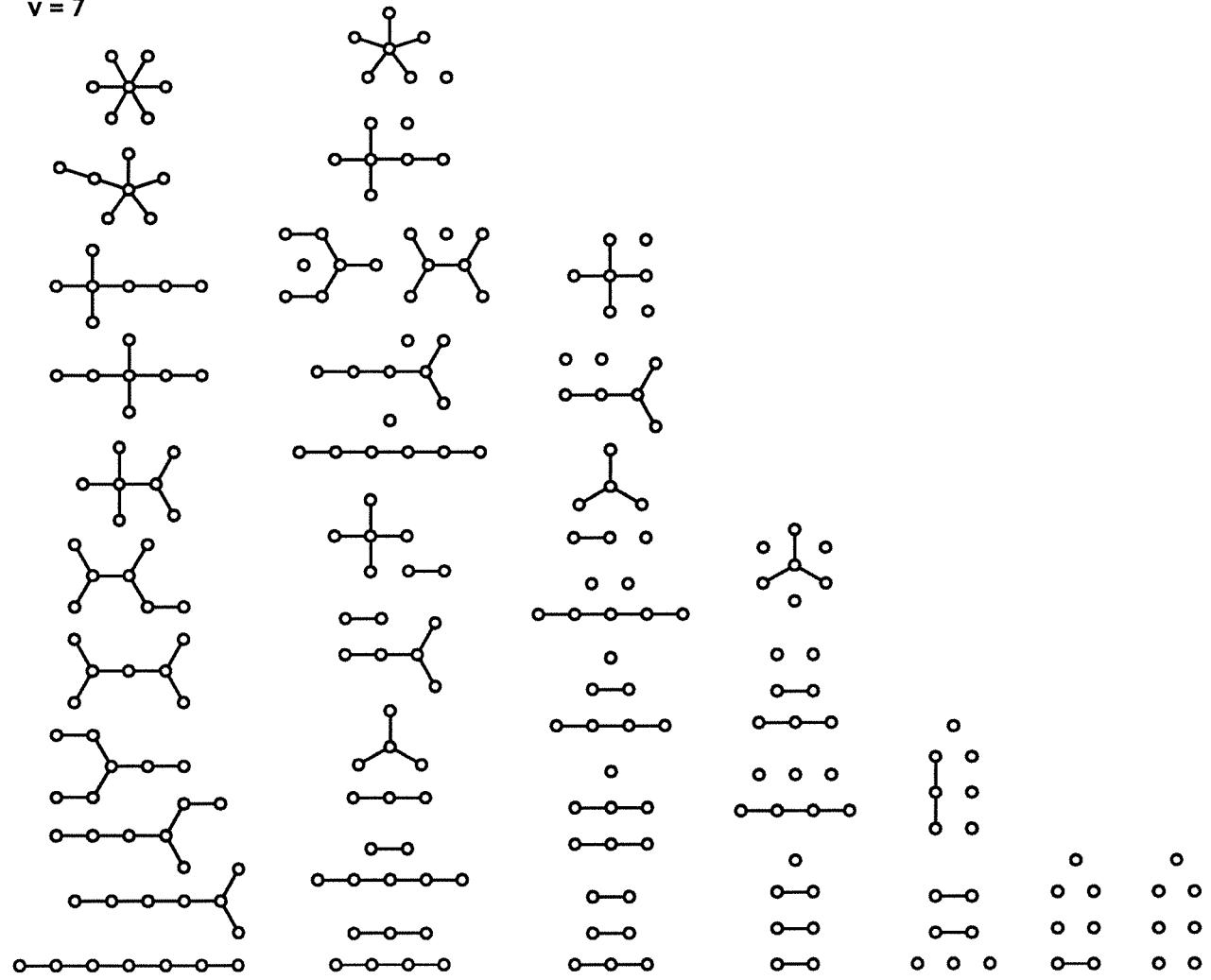
$\omega = 4$

$\omega = 5$

$v = 6$



$v = 7$



$\omega = 1$

$\omega = 2$

$\omega = 3$

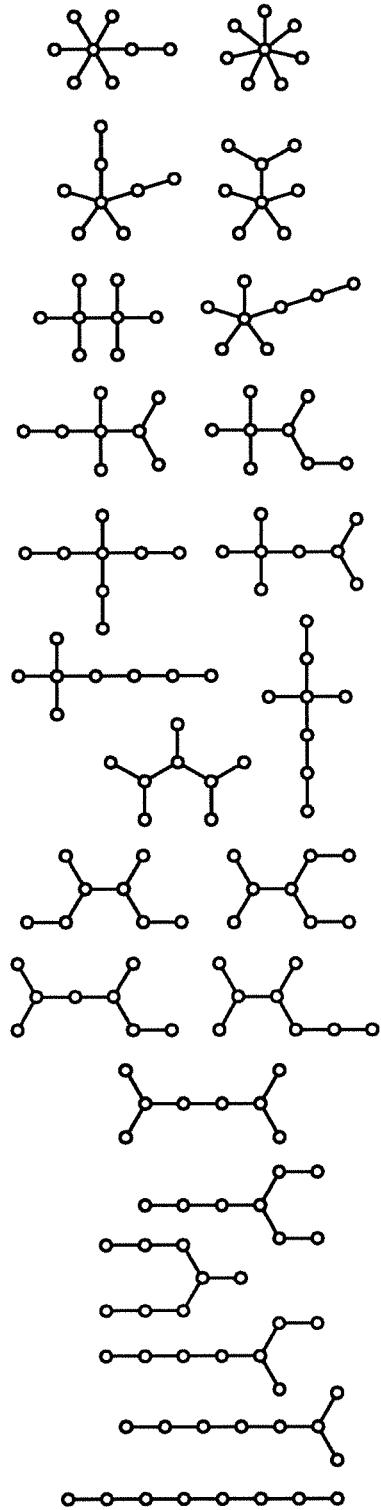
$\omega = 4$

$\omega = 5$

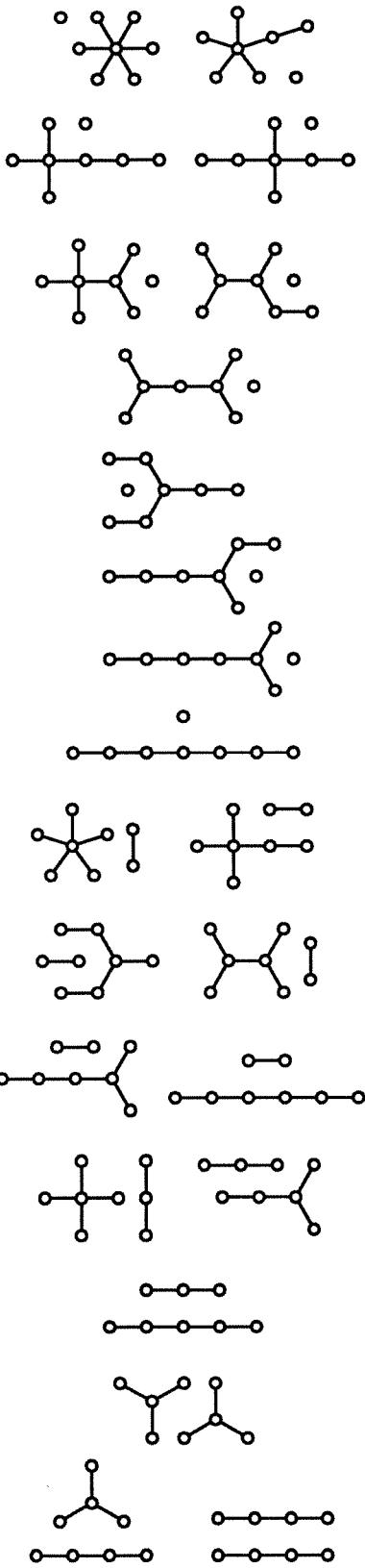
$\omega = 6$

$\omega = 7$

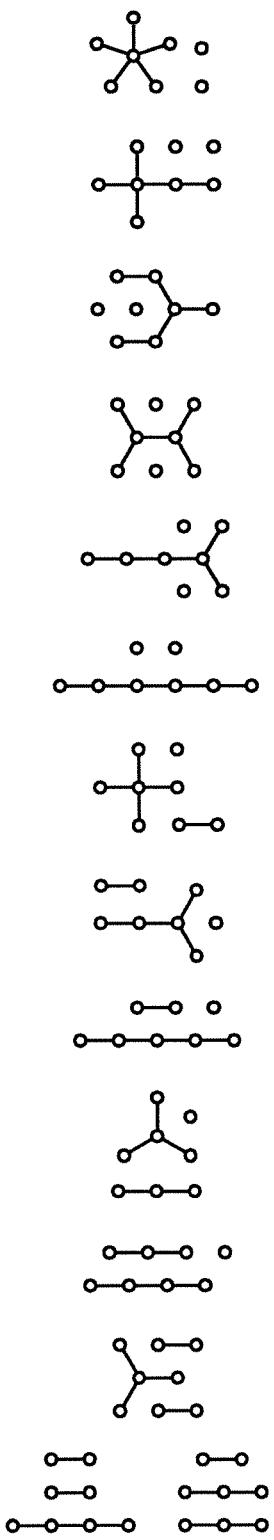
$v = 8$



$\omega = 1$

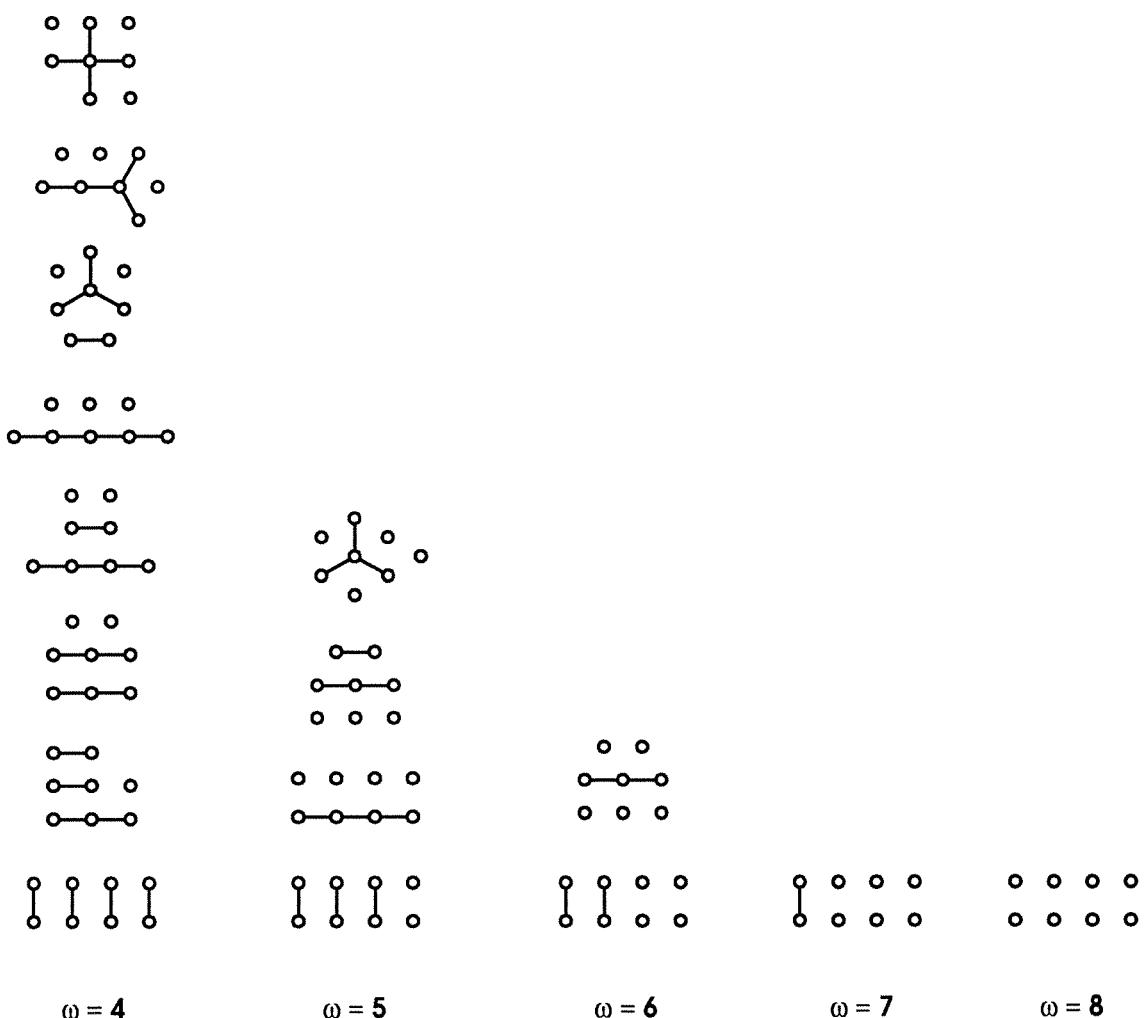


$\omega = 2$

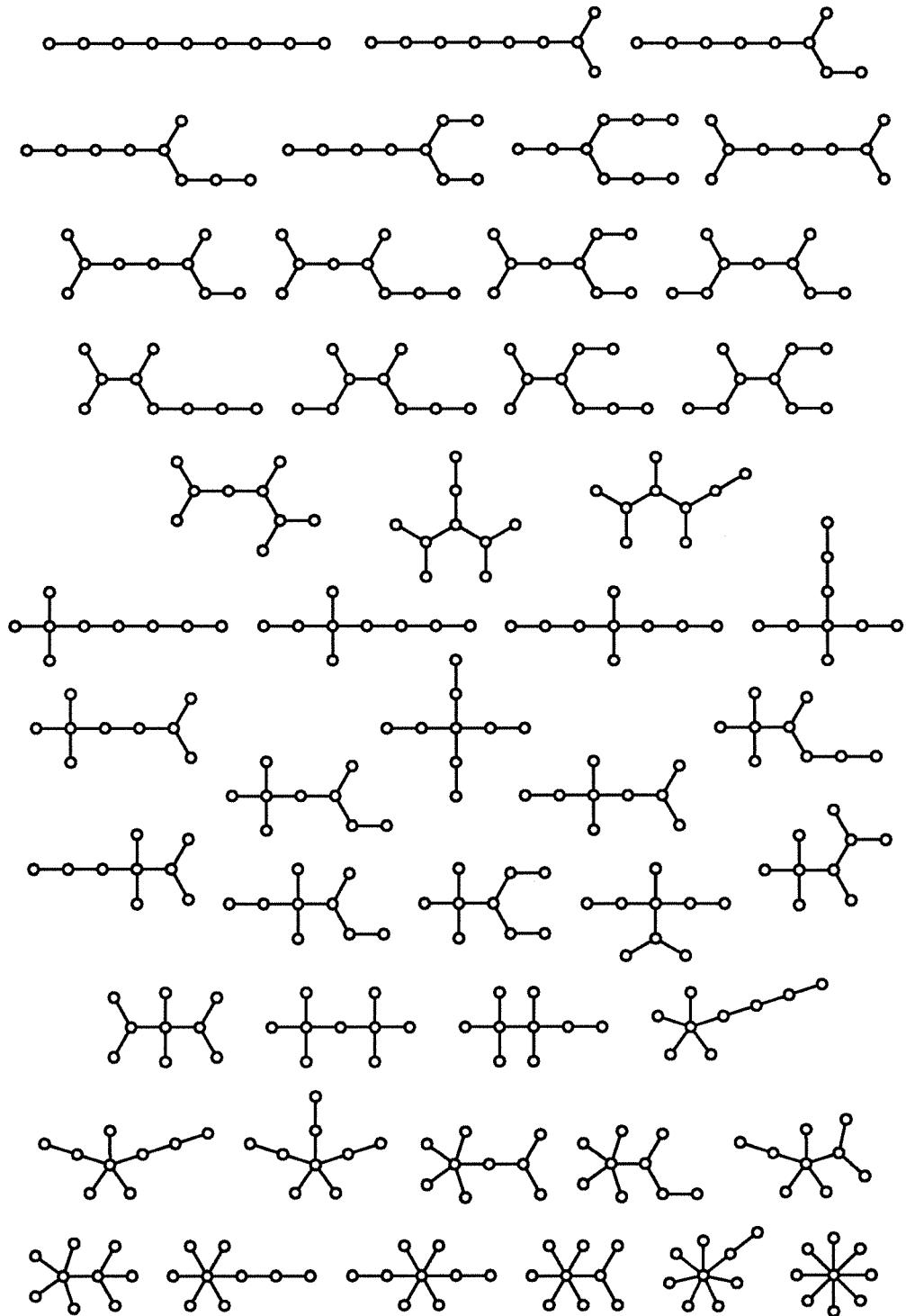


$\omega = 3$

v = 8

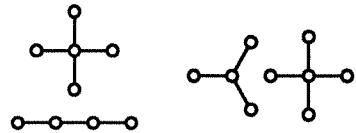
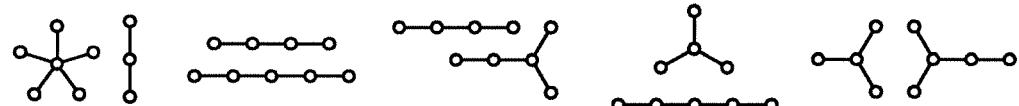
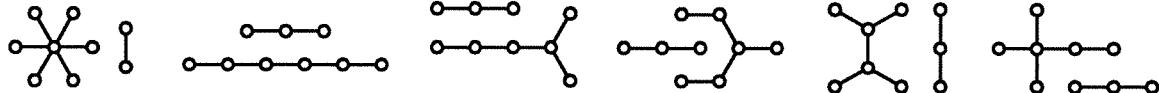
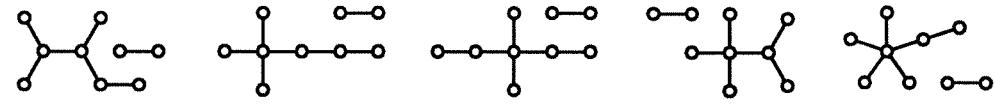
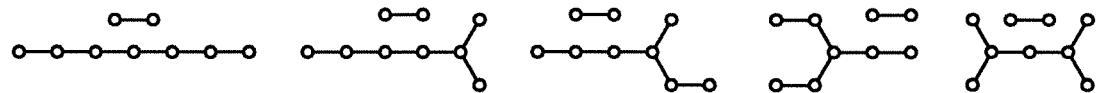
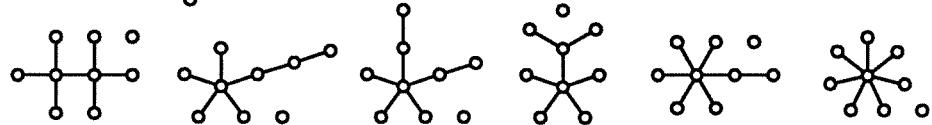
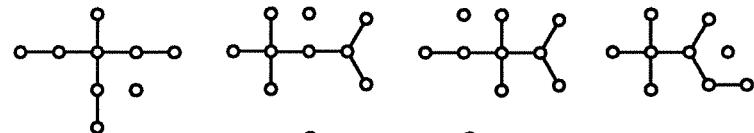
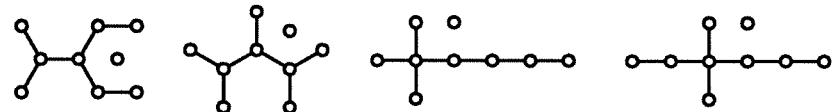
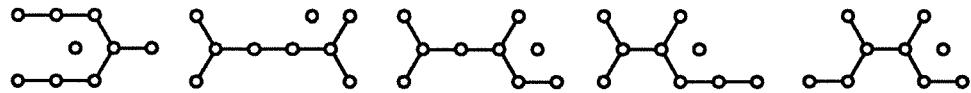
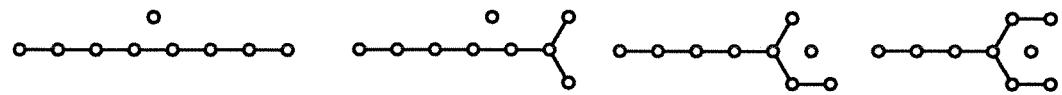


$v = 9$



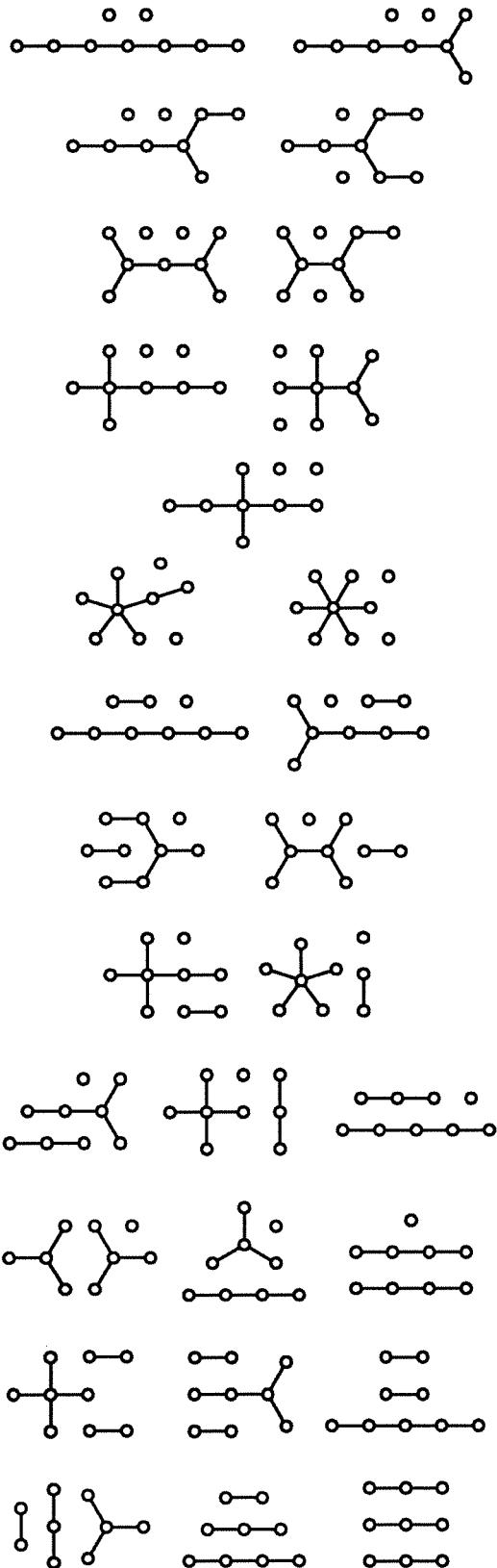
$\omega = 1$

$v = 9$

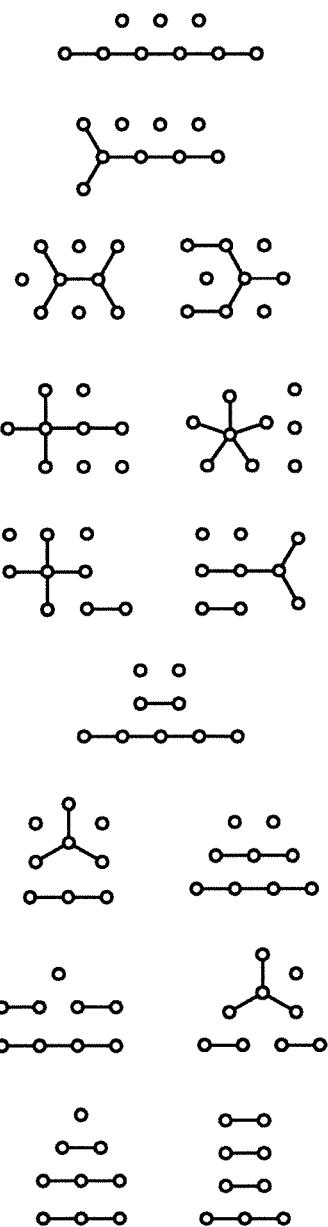


$\omega = 2$

$v = 9$



$\omega = 3$



$\omega = 4$

v = 9

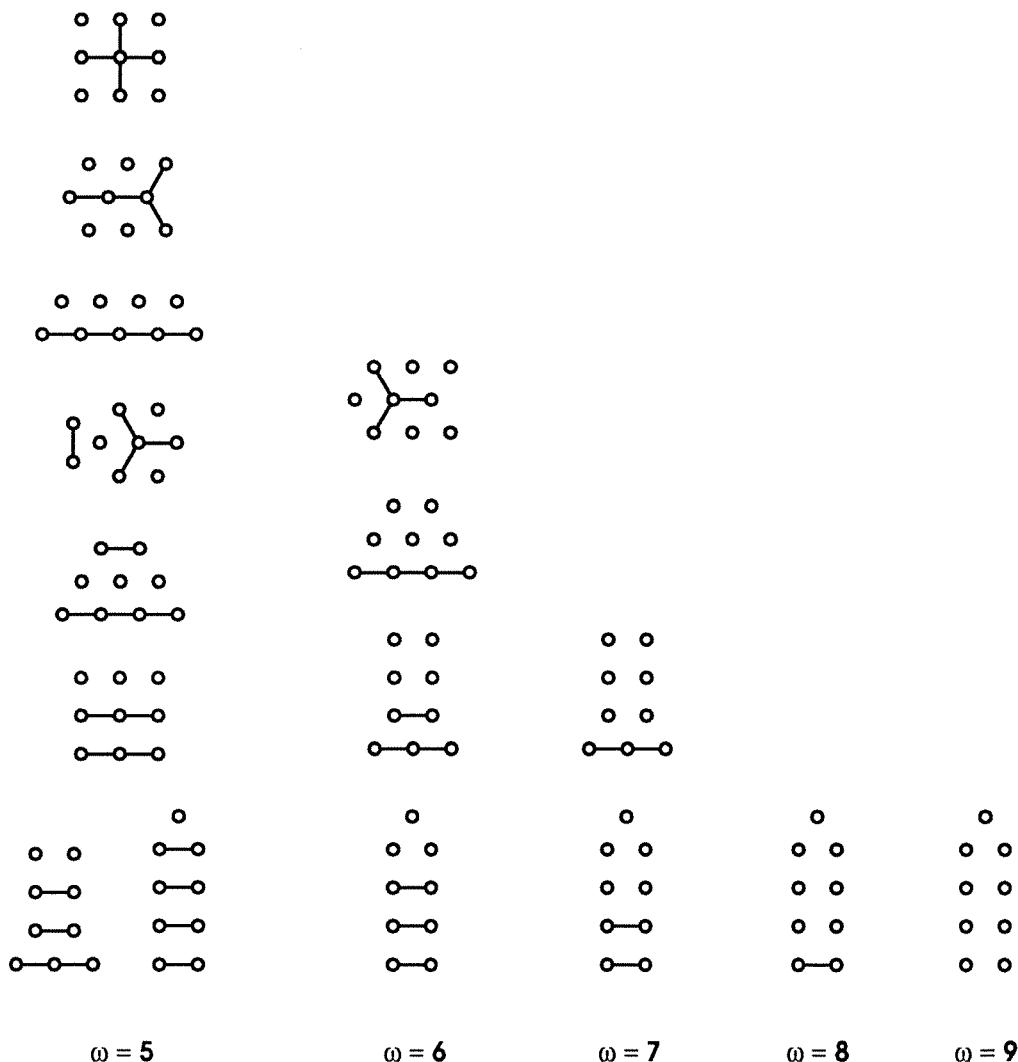


TABLE 3.1 Number of forests with
v vertices and w components

v	w = 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	totals	mean w
1	1															1	1
2	1	1														2	1.5
3	1	1	1													3	2
4	2	2	1	1												6	2.17
5	3	3	2	1	1											10	2.40
6	6	6	4	2	1	1										20	2.45
7	11	11	7	4	2	1	1									37	2.51
8	23	23	14	8	4	2	1	1								76	2.50
9	47	46	29	15	8	4	2	1	1							153	2.49
10	106	99	60	32	16	8	4	2	1	1						329	2.44
11	235	216	128	66	33	16	8	4	2	1	1					710	2.40
12	551	488	284	143	69	34	16	8	4	2	1	1				1601	2.35
13	1301	1121	636	315	149	70	34	16	8	4	2	1	1			3658	2.30
14	3159	2644	1467	710	330	152	71	34	16	8	4	2	1	1		8599	2.25
15	7741	6334	3440	1631	742	336	153	71	34	16	8	4	2	1	1	20514	2.21