

1	2	3	4	5	6	7	8	9	10	11
F	Cumulative number of spheres in triangle of frequency equal to $F-1=Q$ $\frac{Q^2+Q}{2}$	Cumulative number of spheres in tetrahedron of frequency equal to $F-2=P$ $\frac{P^2+P}{6}$	$+ 0 =$		$\times 6$		F^3	$\times 20 =$	Cumulative volume (Tetrahedron = 1) of Vector Equilibrium of frequency = F $20F^3$	Shell volume of Vector Equilibrium of frequency equal to $F+1 = R$ $\left[\left(\frac{R^2-R}{2} \right) \times 12 \right] + 2 \times 10$
0	0	0	$+ 0 =$	0	$\times 6$	$+ 0 =$	0	$\times 20 =$	0	$20 = \{ (0 \times 12) + 2 \} \times 10$
1	1	0	$+ 0 =$	0	$\times 6$	$+ 1 =$	1	$\times 20 =$	20	$140 = \{ (1 \times 12) + 2 \} \times 10$
2	3	1	$+ 0 =$	1	$\times 6$	$+ 2 =$	8	$\times 20 =$	160	$380 = \{ (3 \times 12) + 2 \} \times 10$
3	6	4	$+ 0 =$	4	$\times 6$	$+ 3 =$	27	$\times 20 =$	540	$740 = \{ (6 \times 12) + 2 \} \times 10$
4	10	10	$+ 0 =$	10	$\times 6$	$+ 4 =$	64	$\times 20 =$	1,280	$1,220 = \{ (10 \times 12) + 2 \} \times 10$
5	15	20	$+ 0 =$	20	$\times 6$	$+ 5 =$	125	$\times 20 =$	2,500	$1,820 = \{ (15 \times 12) + 2 \} \times 10$
6	21	35	$+ 1 =$	36	$\times 6$	$+ 0 =$	216	$\times 20 =$	4,320	$2,540 = \{ (21 \times 12) + 2 \} \times 10$
7	28	56	$+ 1 =$	57	$\times 6$	$+ 1 =$	343	$\times 20 =$	6,860	$3,380 = \{ (28 \times 12) + 2 \} \times 10$
8	36	84	$+ 1 =$	85	$\times 6$	$+ 2 =$	512	$\times 20 =$	10,240	$4,340 = \{ (36 \times 12) + 2 \} \times 10$
9	45	120	$+ 1 =$	121	$\times 6$	$+ 3 =$	729	$\times 20 =$	14,580	$5,420 = \{ (45 \times 12) + 2 \} \times 10$
10	55	165	$+ 1 =$	166	$\times 6$	$+ 4 =$	1000	$\times 20 =$	20,000	$6,620 = \{ (55 \times 12) + 2 \} \times 10$
11	66	220	$+ 1 =$	221	$\times 6$	$+ 5 =$	1330	$\times 20 =$	26,620	$7,940 = \{ (66 \times 12) + 2 \} \times 10$
12	78	286	$+ 2 =$	288	$\times 6$	$+ 0 =$	1728	$\times 20 =$	34,560	$9,380 = \{ (78 \times 12) + 2 \} \times 10$
13	91	364	$+ 2 =$	366	$\times 6$	$+ 1 =$	2197	$\times 20 =$	43,940	$10,940 = \{ (91 \times 12) + 2 \} \times 10$
14	105	455	$+ 2 =$	457	$\times 6$	$+ 2 =$	2744	$\times 20 =$	54,880	$12,620 = \{ (105 \times 12) + 2 \} \times 10$
15	120	560	$+ 2 =$	562	$\times 6$	$+ 3 =$	3375	$\times 20 =$	67,500	$14,420 = \{ (120 \times 12) + 2 \} \times 10$
16	136	680	$+ 2 =$	682	$\times 6$	$+ 4 =$	4096	$\times 20 =$	81,920	$16,340 = \{ (136 \times 12) + 2 \} \times 10$
17	153	816	$+ 2 =$	818	$\times 6$	$+ 5 =$	4913	$\times 20 =$	98,260	$18,380 = \{ (153 \times 12) + 2 \} \times 10$
18	171	969	$+ 3 =$	972	$\times 6$	$+ 0 =$	5832	$\times 20 =$	116,640	$20,540 = \{ (171 \times 12) + 2 \} \times 10$
19	190	1140	$+ 3 =$	1143	$\times 6$	$+ 1 =$	6859	$\times 20 =$	137,180	$22,820 = \{ (190 \times 12) + 2 \} \times 10$
20	210	1330	$+ 3 =$	1333	$\times 6$	$+ 2 =$	8000	$\times 20 =$	160,000	

Fig. 971.01 Chart: Table of Concentric, Sphere-Shell Growth Rates