$[S(n)]^2$	$S(n)$	n	n^3	$S(n^3)$
1	1	1	1	1
9	3	2	8	9
36	6	3	27	36
100	10	4	64	100
225	15	5	125	225
441	21	6	216	441
784	28	7	343	784
1296	36	8	512	1296
2025	45	9	729	2025
3025	55	10	1000	3025
4356	66	11	1331	4356
6084	78	12	1728	6084

$$\sqrt{1^3} = 1$$

$$\sqrt{1^3 + 2^3} = 1 + 2$$

$$\sqrt{1^3 + 2^3 + 3^3} = 1 + 2 + 3$$

$$\sqrt{1^3 + 2^3 + 3^3 + 4^3} = 1 + 2 + 3 + 4$$

$\frac{[(1+n)n]^2}{4}$	$\frac{(1+n)n}{2}$	n	n^3	$S(n^3)$

$\frac{[(2+n)(n+1)]^2}{4}$	=	$S(n^3) + (n+1)^3$
	?	

supondo que

$\frac{[(1+n)n]^2}{4}$	=	$S(n^3)$

$$S(n^3) = \frac{[(1+n)n]^2}{4} \quad ==> \quad S(n^3) + (n+1)^3 = \frac{[(1+n)n]^2}{4} + (n+1)^3$$

$$\frac{(n+n^2)^2}{4} + n^3 + 3n^2 + 3n + 1$$

$$\frac{n^2 + 2n^3 + n^4}{4} + \frac{4n^3 + 12n^2 + 12n + 4}{4}$$

$$\frac{[(2+n)(n+1)]^2}{4} = \frac{[n^2 + 3n + 2]^2}{4} = \frac{n^4 + 9n^2 + 4 + 6n^3 + 4n^2 + 12n^2}{4} \quad <==> \quad S(n^3) + (n+1)^3 = \frac{n^4 + 6n^3 + 13n^2 + 12n + 4}{4}$$