

ON PRIME NUMBERS X

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$$A_{[n]} = \sqrt{\frac{\text{Composite}_{[n]}}{4}} + \frac{1}{2}$$

$$B_{[n]} = \frac{7 \cdot A_{[n]}^2 - 13 \cdot A_{[n]} + 8}{2}$$

$\therefore \text{Composite}_{[n]} = \text{nth Composite Number}$

$$\lim_{n \rightarrow \infty} \frac{\ln(n)}{\ln(B_{[n]})} = 1$$

n=Number	Prime(n)=nth Prime number	Composite(n)=nth Composite number	A(n)=(Composite(n)/4)^0.5+0.5	B(n)=(7*A(n)^2-13*A(n)+8)/2	ln(n)/ln(B(n))
1	2	4	1.50000000	2.12500000	0.0000000000
2	3	6	1.72474487	3.200765386	0.595799518514
3	5	8	1.91421356	4.382359313	0.743517717561
4	7	9	2.00000000	5.00000000	0.861353116147
5	11	10	2.08113883	5.631583510	0.931177160707
6	13	12	2.23205081	6.928847577	0.925642135473
7	17	14	2.37082869	8.262513920	0.921477258934
8	19	15	2.43649167	8.940524981	0.949259080999
9	23	16	2.50000000	9.62500000	0.970349596447
10	29	18	2.62132034	11.011038969	0.959851062146
100	541	133	6.26628130	100.701156108	0.998485070226
1000	7919	1197	17.79884389	997.103468324	1.000420100775
10000	104729	11374	53.82447843	9793.901564705	1.002266190318
100000	1299709	110487	166.69792417	96179.156227476	1.003395296485
1000000	15485863	1084605	521.22185474	947468.834435791	1.003921159872
10000000	179424673	10708555	1636.69642769	9365078.660716920	1.004086426704
100000000	2038074743	106091745	5150.54235419	92814828.372937400	1.004064280772
1000000000	22801763489	1053422339	16228.73418459	921695863.547446000	1.003950249916
10000000000	252097800623	10475688327	51175.90504725	9166073761.534860000	1.003796020500
100000000000	2760727302517	104287176420	161468.12556315	91250794966.248300000	1.003627963937

↑ Composite(10^12) is about...