

# INFSER

Comparison ratio test: gives convergent, divergent series. (4s, 8s)	<pre> 6: 5: 4:       sum_{n=2}^N 1/(n*LN(n)) 3:       lim(n^(1+e)*an) : (+w) 2:       sum_{n=1}^N n!/(2*n)! 1:       lim(an+1/an, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>	<pre> 6: 5: 4:       sum_{n=1}^N 1/n^2 3:       lim(n^(1+e)*an) : 0 2:       sum_{k=0}^N 1/2^k 1:       lim(n^(1+e)*an) : 0 Examp Enew CompR Ratio Roott Intte </pre>
Ratio test: gives convergent, divergent series. (1s, 17s)	<pre> 6: 5: 4:       sum_{n=1}^N 1/n 3:       lim(an+1/an, w) : 1 2:       sum_{n=0}^N n^n/sqrt(n!) 1:       lim(an+1/an, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>	<pre> 6: 5: 4:       sum_{n=1}^N 1/n^2 3:       lim(an^(1/n), w) : 1 2:       sum_{n=0}^N 1/n^2 1:       lim(an^(1/n), w) : 1 Examp Enew CompR Ratio Roott Intte </pre>
Roottest: root test (2s)	<pre> 6: 5: 4:       sum_{n=1}^N 1/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^(n-1)/n 3:       lim(an, n=w) : 0 2:       lim(an+1/an) : 1/n+1 1:       s: 9.9999 Leibn Enw En Taylor EKO Grada </pre>
Inttest: integral test (2s)	<pre> 6: 5: 4:       sum_{n=1}^N 1/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^(n-1)/n 3:       lim(an, n=w) : 0 2:       lim(an+1/an) : 1/n+1 1:       s: 9.9999 Leibn Enw En Taylor EKO Grada </pre>
Leibniztest: for alternating series (10s)	<pre> 6: 5: 4:       sum_{n=1}^N 1/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^(n-1)/n 3:       lim(an, n=w) : 0 2:       lim(an+1/an) : 1/n+1 1:       s: 9.9999 Leibn Enw En Taylor EKO Grada </pre>
Σn~: approximate sum up to n (8s)	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^n/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^n/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>
Σn: first n terms of series	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^n/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^n/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>
TaylorX: Taylor series around x0 up to n (5s)	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^n/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^n/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>
Cradius: convergence radius (5s)	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^n/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^n/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>
Σadd: add power series (8s)	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^n/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^n/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>
Σmul: multiply power series (15s)	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^n/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^n/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>
Σdiv: divide of power series (15s)	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^n/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^n/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>
ΣX0: value at X0 (4s)	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^n/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^n/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>
HelpINFSER: help	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^n/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>	<pre> 6: 5: 4:       sum_{n=1}^N (-1)^n/n 3:       lim(an dn, w) : (+w) 2:       sum_{n=1}^N 1/2^n 1:       lim(an dn, w) : 0 Examp Enew CompR Ratio Roott Intte </pre>

HelpINFSER: help	Leibniztest: $\sum (-1)^n a_n, n=0, \dots$ $ a_n+1/a_n $ For alternating series $\sum (n=1, \infty, (-1)^n \times b_n)$ convergence if $ a_n =0$ and $ a_n+1/a_n <1$ En $\leftarrow$ $\sum n + num$ approximate sum up to n En $\sum_{p=1}^n a_p + a_1+a_2+\dots+a_n$ First n terms TaylorX $f(x) \approx x_0 + \frac{f'(x_0)}{1!}(x-x_0)^1 + \dots + \frac{f^{(k)}(x_0)}{k!}(x-x_0)^k, 0, n)$ GRAPH <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK	up to n EX0 $\sum_{p=1}^n f(x_0) \times x_0 + \dots \sum_{p=1}^n f(x_0)$ Cradius $\sum p + p$ convergence radius Ex $\sum_{p=1}^n + \sum_{p=1}^n \sum_{p=1}^n$ example For $\sum_{p=1}^n \dots \sum_{p=1}^n$ Eadd $\sum_{p=1}^n \sum_{p=1}^n n + add$ Esub $\sum_{p=1}^n \sum_{p=1}^n n + subtract$ Emul $\sum_{p=1}^n \sum_{p=1}^n n + multiply$ Ediv $\sum_{p=1}^n \sum_{p=1}^n n + divide$ add... power series up to n GRAPH <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OK
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