

FOURSER

→a02: calculate a0/2 (2s)	<pre> 6: 5: 4: 3: 2: 1: (X 2-X) (0 1 2) 1 2 </pre>	<pre> 6: 5: 4: 3: 2: 1: (X 2-X) (0 1 2) 2*(-1)^k-2 k^2*pi^2 0 </pre>
→ak, bk: calculate ak, bk (16s, 14s)	<pre> 6: 5: 4: 3: 2: 1: (X 2-X) (0 1 2) (-1)^k-1 k^2*pi^2 </pre>	<pre> 6: 5: 4: 3: 2: 1: (X 2-X) (0 1 2) 2*(-1)^k-2 k^2*pi^2 0 </pre>
→ck: calculate complex coefficient (30s), (20s)	<pre> 6: 5: 4: 3: 2: 1: (X 2-X) (0 1 2) (-1)^k-1 k^2*pi^2 </pre>	<pre> 6: 5: 4: 3: 2: 1: RAD XYZ DEC R= 'X' CHOME FOURSER3 USR (X 2-X) (0 1 2) 2*(-1)^k-2 k^2*pi^2 0 </pre>
→Fseries: Fourier series for piece wise functions (16s), (30s)	<pre> 6: 5: 4: 3: 2: 1: (X 2-X) (0 1 2) pi + sum_{k=1}^n -[2/k * SIN(k*X)] </pre>	<pre> 6: 5: 4: 3: 2: 1: (X 2-X) (0 1 2) 1/2 + sum_{k=1}^n 2*(-1)^k-2 / (k^2*pi^2) * cos(k*X*pi) </pre>
Fk0: function values (1,3s)	<pre> 4: 3: 2: 1: 2*(-1)^k-2 k^2*pi^2 (1 2 3 4) [-4/2 0 -4/2 0] [pi 9*pi] </pre>	<pre> 4: 3: 2: 1: 2*(-1)^k-2 k^2*pi^2 (1 2 3 4) [-4/2 0 -4/2 0] [pi 9*pi] </pre>
GraphX: graph of piece wise function {X '2-X'} {0 1 2} (6s)	<pre> 4: 3: 2: 1: 2*(-1)^k-2 k^2*pi^2 (1 2 3 4) [-4/2 0 -4/2 0] [pi 9*pi] </pre>	
HelpFOURSER: help	<pre> FOURIERSERIES (N=257) F(X)=a0/2+E(k=0..n, akCOS(k*pi*X)) +bkSIN(k*pi*X)) F(X)=E(k=-n..n, ckEXP(-i*k*pi*X)) ck=1/2(ak-ibk), ak=2*RE(ck), bk=-2*IM(ck), c0=a0/2 FOURSER: CHOOSEBOX WITH EXAMPLES +a02, +ak F, cf1..fn> CN1..Nn+13 +bk, +ck + a0/2, ak, bk, ck FOURIERCOEFF. FOR PIECEWISE FUNCTIONS </pre>	<pre> Fseries (F) (X) + E REAL FOURIERSERIES F(X) NO, CN1..N + F F(X), F(X1)..N F(X) n + F(X1)..F(Xn) GraphX (F) (X) + GRAPH Trsinp F(X) + F(X) TRIGONOMETRIC SIMPLIF. EXP(i*2*k*pi*X)=1 ETC Fourier 'F(X)' period + ck AS BUILT IN FOURIER BUT WITH CHOICE OF PERIOD </pre>