The results of finding roots of a single 1D function are put into several variables:

V_numRoots	The number of roots found. Either 1 or 2.
V_Root	The root.
V_YatRoot	The Y value of the function at the root. *Always* check this; some discontinuous functions may give an indication of success, but the Y value at the found root isn't even close to zero.
V_Root2	Second root if FindRoots found two roots.
V_YatRoot2	The Y value at the second root.

Results for roots of a system of nonlinear functions are reported in waves:

W_Root	X values of the root of a system of nonlinear functions. If you used /X=*xWave*, the root is reported in your wave instead.
W_YatRoot	The Y values of the functions at the root of a system of nonlinear functions. Only one root is found during a single call to FindRoots.

Roots of a polynomial are reported in a wave:

W_polyRoots	A complex wave containing the roots of a polynomial. The number of roots should be equal to the degree of the polynomial, unless a root is doubled.

See Also

Finding Function Roots on page III-338.

The FindRoots operation uses the Jenkins-Traub algorithm for finding roots of polynomials:

Jenkins, M.A., Algorithm 493, Zeros of a Real Polynomial, *ACM Transactions on Mathematical Software*, *1*, 178-189, 1975. Used by permission of ACM (1998).

FindSequence

FindSequence [***flags***] ***srcWave***

The FindSequence operation finds the location of the specified sequence starting the search from the specified start point. The result of the search stored in V_value is the index of the entry in the wave where the first value is found or -1 if the sequence was not found.

Flags

/FNAN	Specifies searching for a NaN value when srcWave is floating point. This flag was added in Igor Pro 7.00.
/I=*wave*	Specifies an integer sequence wave for integer search.
/M=*val*	If there are repeating entries in the match sequence, *val* is a tolerance value that specifies the maximum difference between the number of repeats. So, for example, if the match sequence is aaabbccc and the *srcWave* contains a sequence aabbcc then the sequence will not be considered a match if *val*=0 but will be considered a match if *val*=1.
/R	Searches in reverse from the point in *srcWave* specified by /S or, if you omit /S, from the end of *srcWave*. /R was added in Igor Pro 9.00.
/S=*start*	Sets starting point of the search. If you omit /S, the search starts from the start of *srcWave* or, if you include /R, from the end of *srcWave*.
/T=*tolerance*	Defines the tolerance (value ± *tolerance* will be accepted) when comparing floating point numbers.
/U=*uValueWave*	Specifies the match sequence wave in case of unsigned long range.