

Here are some commands to test CreateRatioOfWaves:

```
Make test1 = {1, 2, 3}, test2 = {2, 3, 4}
CreateRatioOfWaves(test1, test2, "ratio")
Edit test1, test2, ratio
```

Function Syntax

The basic syntax of a function is:

```
Function <Name> (<Parameter list> [<Optional Parameters>]) [:<Subtype>]
    <Parameter declarations>
    <Local variable declarations>
    <Body code>
    <Return statement>
End
```

Here is an example:

```
Function Hypotenuse(side1, side2)
    Variable side1, side2          // Parameter declaration
    Variable hyp                  // Local variable declaration
    hyp = sqrt( side1^2 + side2^2 ) // Body code
    return hyp                    // Return statement
End
```

You could test this function from the command line using one of these commands:

```
Print Hypotenuse(3,4)
Variable/G result = Hypotenuse(3,4); Print result
```

As shown above, the function returns a real, numeric result. The Function keyword can be followed by a flag that specifies a different result type.

Flag	Return Value Type
/D	Double precision number (obsolete)
/C	Complex number
/S	String
/WAVE	Wave reference
/DF	Data folder reference

The /D flag is obsolete because all calculations are now performed in double precision. However, it is still permitted.

The Function Name

The names of functions must follow the standard Igor naming conventions. Names can consist of up to 255 characters. Only ASCII characters are allowed. The first character must be alphabetic while the remaining characters can include alphabetic and numeric characters and the underscore character. Names must not conflict with the names of other Igor objects, functions or operations. Names in Igor are case insensitive.

Prior to Igor Pro 8.00, function names were limited to 31 bytes. If you use long function names, your procedures will require Igor Pro 8.00 or later.