```
Test($"wave0")
String wName = "wave0"; Test($wName)
```

In the first call to Test, the wave reference is a literal wave name. In the second call, we create the wave reference using $<literal string>. In the third call, we create the wave reference using $<string variable>. $<literal string> and $<string variable> are specific cases of the general case $<string expression>.

If the function expected to receive a reference to a text wave, we would declare the parameter using:

```
   WAVE/T w
```

If the function expected to be receive a reference to a complex wave, we would declare the parameter using:

```
   WAVE/C w
```

If you need to return a large number of values to the calling routine, it is sometimes convenient to use a parameter wave as an output mechanism. The following example illustrates this technique:

```
Function MyWaveStats(inputWave, outputWave)
   WAVE inputWave
   WAVE outputWave

   WaveStats/Q inputWave

   outputWave[0] = V_npnts
   outputWave[1] = V_avg
   outputWave[2] = V_sdev
End

Function Test()
   Make/O testwave= gnoise(1)

   Make/O/N=20 tempResultWave
   MyWaveStats(testwave, tempResultWave)
   Variable npnts = tempResultWave[0]
   Variable avg = tempResultWave[1]
   Variable sdev = tempResultWave[2]
   KillWaves tempResultWave

   Printf "Points: %g; Avg: %g; SDev: %g\r", npnts, avg, sdev
End
```

If the calling function needs the returned values only temporarily, it is better to return a free wave as the function result. See **Wave Reference Function Results** on page IV-76.

Wave Accessed Via String Passed as Parameter

This technique is of most use when the wave might not exist when the function is called. It is appropriate for functions that create waves.

```
Function Test(wName)
   String wName            // String containing a name for wave

   Make/O/N=5 $wName
   WAVE w = $wName         // Create a wave reference
   Print NameOfWave(w)
End

Test("wave0")
```

This example creates wave0 if it does not yet exist or overwrites it if it does exist. If we knew that the wave had to already exist, we could and should use the wave parameter technique shown in the preceding section. In this case, since the wave may not yet exist, we can not use a wave parameter.