*Output*: A sparse matrix in CSC format represented by W_CSCValues, W_CSCRows, and W_CSCPointerB.

#### MatrixSparse TOCSC Example

```
Function DemoMatrixSparseTOCSC()
   // Create the Wikipedia example 4x4 matrix in dense format
   Make/FREE/D/N=(4,4) dense
   dense[0][0] = {0,5,0,0}
   dense[0][1] = {0,8,0,6}
   dense[0][2] = {0,0,3,0}
   dense[0][3] = {0,0,0,0}

   // Create a sparse matrix in CSC format from the dense matrix
   // MatrixSparse requires rowsA and colsA even though they are not used here
   MatrixSparse rowsA=4, colsA=4, matrixB=dense, operation=TOCSC
   WAVE W_CSCValues, W_CSCRows, W_CSCPointerB      // Outputs from TOCSC

   // Print the 1D waves representing the CSC sparse matrix
   Print W_CSCValues
   Print W_CSCRows
   Print W_CSCPointerB
End
```

## MatrixSparse TOCSR

TOCSR produces a sparse output matrix in CSR format equivalent to the input matrix which may be in dense, COO, or CSC format.

*Inputs*: A dense matrix specified by the matrixB keyword or a sparse matrix specified by the cooA or cscA keywords.

*Output*: A sparse matrix in CSR format represented by W_CSRValues, W_CSRColumns, and W_CSRPointerB.

#### MatrixSparse TOCSR Example

```
Function DemoMatrixSparseTOCSR()
   // Create the Wikipedia example 4x4 matrix in dense format
   Make/FREE/D/N=(4,4) dense
   dense[0][0] = {0,5,0,0}
   dense[0][1] = {0,8,0,6}
   dense[0][2] = {0,0,3,0}
   dense[0][3] = {0,0,0,0}

   // Create a sparse matrix in CSR format from the dense matrix
   // MatrixSparse requires rowsA and colsA even though they are not used here
   MatrixSparse rowsA=4, colsA=4, matrixB=dense, operation=TOCSR
   WAVE W_CSRValues, W_CSRColumns, W_CSRPointerB   // Outputs from TOCSR

   // Print the 1D waves representing the CSR sparse matrix
   Print W_CSRValues
   Print W_CSRColumns
   Print W_CSRPointerB
End
```

## MatrixSparse TODENSE

TODENSE produces a dense output matrix equivalent to the sparse input matrix which may be in COO, CSC, or CSR format.

*Inputs*: A sparse matrix specified by the cooA, cscA, or csrA keywords.

*Output*: Dense output matrix M_cooToDense, M_cscToDense, or M_csrToDense.