

Use Excel 2007 to compute BA and AB if  $A = \begin{bmatrix} 1 & 2 \\ 0 & -1 \\ 3 & -2 \end{bmatrix}$  and  $B = \begin{bmatrix} 2 & 4 & -1 \\ 3 & -2 & 1 \\ 2 & 0 & 2 \\ 1 & -3 & 0 \end{bmatrix}$ .

**Enter the Matrices as A and B**

1. In cells A1 and A5, type labels for your matrices.
2. Enter each matrix, leaving at least one row between them.

	A	B	C	D
1	Matrix A	1	2	
2		0	-1	
3		3	-2	
4				
5	Matrix B	2	4	-1
6		3	-2	1
7		2	0	2
8		1	-3	0
9				

**Do the matrix multiplication BA**

1. Type a label for the product in cell A10
2. Click in B10 where you wish to see the resulting matrix. Drag the mouse to select the cells where you want the result to be placed.

9			
10	Matrix BA		
11			
12			
13			
14			

3. In the function line at the top of the sheet, put =MMULT(B5:D8, B1:C3). To do this, type the command =MMULT( and then highlight the range of cells that make up the first matrix, type a comma , then highlight the range of cells of the second matrix. A parenthesis ) is needed to complete the command.

	A	B	C	D
1	Matrix A	1	2	
2		0	-1	
3		3	-2	
4				
5	Matrix B	2	4	-1
6		3	-2	1
7		2	0	2
8		1	-3	0
9				
10	Matrix BA	=MMULT(B5:D8,B1:C3)		
11				
12				
13				
14				

4. Press **CTRL+SHIFT+ENTER** on the keyboard to see the resulting matrix.

9				
10	Matrix BA	-1	2	
11		6	6	
12		8	0	
13		1	5	
14				