Student Name: _____ **Score:**

Multiplication of Matrices

Existence: S2

For each pair of matrices, find a) *AB* and b) *BA*. If a product is not possible to find, state 'not possible'.

$A = \begin{bmatrix} -2 & 4 & 1 \\ 6 & 2 & 5 \end{bmatrix}$, $B = \begin{bmatrix} 3 & 4 \\ -5 & 6 \\ -2 & 7 \end{bmatrix}$

AB = BA =

$A = \begin{bmatrix} 7 & -5 & 4 \\ -6 & 2 & 3 \end{bmatrix}$, $B = \begin{bmatrix} 1 \\ -2 \\ 8 \end{bmatrix}$

AB =

$A = \begin{bmatrix} 7 & 2 & 3 \\ -5 & 4 & 1 \end{bmatrix}$, $B = \begin{bmatrix} 6 \\ 3 \\ 4 \end{bmatrix}$

AB =

$A = \begin{bmatrix} 5 & -7 \\ 2 & -4 \\ 1 & 1 \end{bmatrix}$, $B = \begin{bmatrix} 4 & 2 & -1 \\ 7 & 6 & 9 \end{bmatrix}$

AB = BA =

Student Name: _____ Score:

Answer key

Multiplication of Matrices

Existence: S2

$AB = \begin{bmatrix} -28 & 23 \\ -2 & 71 \end{bmatrix}$ $BA = \begin{bmatrix} 18 & 20 & 23 \\ 46 & -8 & 25 \\ 46 & 6 & 33 \end{bmatrix}$

$AB = \begin{bmatrix} 49 & 30 \\ 14 & 23 \end{bmatrix}$ $BA = \begin{bmatrix} -5 \\ -38 \\ 2 \end{bmatrix}$

$AB = \begin{bmatrix} 60 \\ -14 \end{bmatrix}$ BA is 'no

$AB = \begin{bmatrix} -29 & -32 & -68 \\ -20 & -20 & -38 \\ 11 & 8 & 8 \end{bmatrix}$ $BA = \begin{bmatrix} 23 & -37 \\ 56 & -64 \end{bmatrix}$