**6B Matrix Multiplication**

1. Calculate the value of AB when:

$A=\left[\begin{matrix}1&-2\\3&4\end{matrix}\right]$, $B=\left[\begin{matrix}-3\\2\end{matrix}\right]$

1. Given that:

$A=\left[\begin{matrix}-1&0\\2&3\end{matrix}\right]$, $B=\left[\begin{matrix}4&1\\0&-2\end{matrix}\right]$

Calculate the value of **AB** and **BA**

1. Given that:

$A=\left[\begin{matrix}1&-1&2\end{matrix}\right]$, $B=\left[\begin{matrix}3&-2\end{matrix}\right]$, $C=\left[\begin{matrix}4\\5\end{matrix}\right]$

Determine whether each of the following can be evaluated and if so, find the product:

1. **AB**
2. **BC**
3. **CA**
4. **BCA**
5. Given that BA = (0), calculate AB in terms of a.

$A=\left[\begin{matrix}-1\\a\end{matrix}\right]$, $B=\left[\begin{matrix}b&2\end{matrix}\right]$