**a** = $\left(\begin{matrix}3\\2\end{matrix}\right)$ **b** = $\left(\begin{matrix}1\\-4\end{matrix}\right)$ **c** = $\left(\begin{matrix}-1&2\\3&4\end{matrix}\right)$ **d** = $\left(\begin{matrix}2&1\\5&0\end{matrix}\right)$

Find:

1. **a**+**b**
2. 2**a**
3. 5**b**
4. 2**a**-5**b**
5. 3**c**
6. -**c**
7. 2**d**
8. **c**+**d**
9. 3**c**-2**d**
10. **a**+**d**

Answers:

1. $\left(\begin{matrix}4\\-2\end{matrix}\right)$
2. $\left(\begin{matrix}6\\4\end{matrix}\right)$
3. $\left(\begin{matrix}5\\-20\end{matrix}\right)$
4. $\left(\begin{matrix}1\\24\end{matrix}\right)$
5. $\left(\begin{matrix}-3&6\\9&12\end{matrix}\right)$
6. $\left(\begin{matrix}1&-2\\-3&-4\end{matrix}\right)$
7. $\left(\begin{matrix}4&2\\10&0\end{matrix}\right)$
8. $\left(\begin{matrix}1&3\\8&4\end{matrix}\right)$
9. $\left(\begin{matrix}-7&4\\-1&12\end{matrix}\right)$
10. NA

**C:**

Be able to multiply matrices such as $\left(\begin{matrix}4&1\\2&3\end{matrix}\right)\left(\begin{matrix}1&2\\3&4\end{matrix}\right)$.

**A:**

Be able to multiply matrices such as $\left(\begin{matrix}1&0&-3\end{matrix}\right)\left(\begin{matrix}1&2\\3&4\\5&6\end{matrix}\right)$.

Know the implications of multiplying matrices *AB* vs *BA*.

<http://www.youtube.com/watch?v=sYlOjyPyX3g>

<http://www.youtube.com/watch?v=YtMYfvypgM4>

<http://www.youtube.com/watch?v=0L90Kkn90J8>

www.colmanweb.co.uk/x.htm

www.colmanweb.co.uk/y.htm

www.colmanweb.co.uk/z.htm