**10B Forces as Vectors**

1. The forces $2i+3j,$ $4i-j$, $-3i+2j$ and $xi+yj$ act on an object which is in equilibrium. Find the values of x and y.
2. In this question i represents the unit vector due east, and j represents the unit vector due north. A particle begins at rest at the origin. It is acted on by three forces $\left(2i+j\right)N,$ $\left(3i-2j\right)N$ and $\left(-i+4j\right)N$.
3. Find the resultant force in the form $pi+qj$
4. Work out the magnitude and bearing of the resultant force
5. Describe the motion of the particle