**11D Position Vectors**

1. The points A and B in the diagram have coordinates (1,5) and (7,4) respectively. Find, in terms of $i$ and $j$:
2. The position vector of $A$
3. The position vector of $B$
4. The vector $\vec{AB}$
5. $\vec{OA}$ = 5i -2j and $\vec{AB}$ = 3i +4j Find:
6. The position vector of $B$
7. The exact value of $\vec{\left|OB\right|}$ in simplified surd form