Position vectors

A vector used to represent a position is unsurprisingly known as a **position vector**.

A position can be thought of as a translation from the origin.

The position vector of a point A is the vector $\overrightarrow{OA}$, where O is the origin. $\overrightarrow{OA}$ is usually written as $\boldsymbol{a}$.

Examples

1. The points A and B have coordinates $(3,4)$ and $(11,2)$ respectively.
Find, in terms of i and j:

a) The position vector of A
b) The position vector of B
c) The vector $\overrightarrow{AB}$

2. $\overrightarrow{OA} = 5i - 2j$ and $\overrightarrow{AB} = 3i + 4j$. Find:

a) The position vector of B.

b) The exact value of $\left|\overrightarrow{OB}\right|$ in simplified surd form.

Exercise 11D Pg 243/244