2. The quadrilateral $OABC$ has $\overrightarrow{OA} = 4\mathbf{i} + 2\mathbf{j}$, $\overrightarrow{OB} = 6\mathbf{i} - 3\mathbf{j}$ and $\overrightarrow{OC} = 8\mathbf{i} - 20\mathbf{j}$.

(*a*) Find $\overrightarrow{AB}$.

(**2**)

(*b*) Show that quadrilateral $OABC$ is a trapezium.

(**2**)

(**Total for Question 2 is 4 marks**)