Q1) (a) Find vector projection of $2\mathbf{i} - 3\mathbf{j} + \mathbf{k}$ along $6\mathbf{i} - 3\mathbf{j} + 2\mathbf{k}$.

b) Find the cross product of $a = \langle 2, 1, -2 \rangle$ and $b = \langle 1, -1, 3 \rangle$. Show that the cross product is orthogonal to both $a$ and $b$.

Q2) Find a vector orthogonal to the plane containing vectors $a = \langle 3, -1, 1 \rangle$ and $b = \langle 2, 3, 1 \rangle$. 