Q9: Any sequence $x_n$ in $M+N$ can be written as $u_n+v_n$ for $u_n \in M, v_n \in N$. By continuity of the innner product, we have that

$$\langle x_n, x_n\rangle = \langle v_n, v_n\rangle + 2\langle u_n, v_n\rangle + \langle u_n, u_n\rangle = |v_n|^2 + |u_n|^2 \to |u|^2 + |v|^2.$$

Therfore $x_n \to x = u + v$.