Q1.Problem 13 page 122 from the textbook

Q2. Show that S is a subspace of $\mathbb{R}^3$ where $S = \{(a, b, c)^T \mid a + b + c = 0\}$

Q3. Let $\mathbb{R}^{2 \times 2}$ be the vector space of all 2×2 matrices with real entries. Let W be the subset of $\mathbb{R}^{2 \times 2}$ that consists of all matrices with zero determinant. Determine whether W form a subspace of $\mathbb{R}^{2 \times 2}$.

Q4. Let V be the vector space of all functions from $\mathbb{R}$ into $\mathbb{R}$. Show that W is a subspace of V where W consists of the odd functions, i.e. those functions f for which $f(-x) = -f(x)$.

Q5. Problem 8 page 131 from the textbook