Q1 Given two vectors $\mathbf{A}=(1, 2, 1)$, and $\mathbf{B}=(0,1,1)$, find angle between them.

Q2 Are $(1, 2, 3)$, $(2, 3, 4)$ and $(2, 4, 6)$ linearly independent?
Q3 V is a subspace of $\mathbb{R}^3$ consisting of all vectors of the form $(a, 0, b)$. Find basis of $V$ and give its dimensions.

Q4 Solve the homogeneous system $x+2y+2z=0$, $2x+3y+4z=0$ and $3x+4y+6z=0$. Use row reduced echelon form method.