1 Consider the matrix A shown on the right.

$$\begin{bmatrix} 2 & 1 & -1 \\ 2 & 2 & 2 \\ -1 & 0 & t \end{bmatrix}$$

(a) Find the value (or values) of t for which the columns of A are linearly dependent. Find also the corresponding linear dependence relation (s).

(b) Assume now that $t = 1$. Does the last column belong to the span of the other columns?