## M20580 L.A. and D.E. Tutorial ${\bf Quiz}~2$

1. Describe all solutions of  $A\mathbf{x} = \mathbf{b}$  in parametric form, where

$$A = \begin{bmatrix} 1 & 0 & 3 & 1 \\ 2 & 0 & 6 & 2 \\ 1 & 0 & 0 & 1 \\ 2 & 0 & 0 & 2 \end{bmatrix}, \qquad \mathbf{b} = \begin{bmatrix} 3 \\ 6 \\ 2 \\ 4 \end{bmatrix}$$

2. Do the columns of B span all of  $\mathbb{R}^3$ ? (You must show work to get full credit)

$$B = \begin{bmatrix} 1 & 0 & 2 \\ 3 & -3 & 3 \\ 1 & 2 & 4 \end{bmatrix}$$