MA 237-02 §1.1 - 1.2 Quiz #1	score	Name: 29 August 2001
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1. If A = (1, 2, 4) and B = (2, -1, 3) are vectors in standard position (tail at the origin), find the vector that goes from the tip of *A* to the tip of *B*. *(6 points)* 

2. Determine a parametric equation for the line in  $\mathbb{R}^3$  that contains the points (1, 2, 3) and (2, -1, 2). (7 points)

3. The following set of matrices is a dependent set. Show this by expressing one of the matrices as a linear combination of the others. You should be able to see this by trial-and-error. (*7 points*)

 $\left\{ \begin{bmatrix} 3 & 0 & 1 \\ 2 & 1 & 4 \\ 1 & 1 & 1 \end{bmatrix}, \begin{bmatrix} 1 & 2 & 3 \\ 2 & 1 & 5 \\ -1 & -1 & -1 \end{bmatrix}, \begin{bmatrix} 2 & -2 & -2 \\ 0 & 0 & -1 \\ 2 & 2 & 2 \end{bmatrix} \right\}$