| MA 237-02 <br> §1.1-1.3 | QuiZ \#1 |  | same: |
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1. Determine a parametric equation for the line in $\mathbb{R}^{3}$ that contains the points $(3,2,1)$ and (2, -1, -2). (7 points)
2. 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. (6 points)

$$
\left\{\left[\begin{array}{ll}
4 & 1 \\
2 & 2
\end{array}\right],\left[\begin{array}{ll}
1 & 2 \\
2 & 1
\end{array}\right],\left[\begin{array}{cc}
3 & -1 \\
0 & 1
\end{array}\right]\right\}
$$

3. Suppose you are solving a system of three equations in three unknowns and you are able to reduce the system to the following two equations.

$$
\begin{array}{r}
2 x-y+z=2 \\
y+z=4
\end{array}
$$

After doing further work, express the solutions to the system in parametric form and give the translation vector and spanning vector(s). Describe the solution geometrically (point, line, plane, etc.). (7 points)

