Math 54 Worksheet 15
GSI: Lionel Levine
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1. (a) Find an orthonormal basis for the row space of the matrix

$$\begin{pmatrix} 1 & 1 & 1 \\ 0 & -3 & 4 \\ 3 & 0 & -1 \end{pmatrix}.$$

   (b) Extend this basis to an orthonormal basis for all of $\mathbb{R}^3$.

2. When you apply the Gram-Schmidt process to the vectors

$$(1, 0, 0), \quad (2, -2, -1), \quad (0, 4, 2)$$

   what goes wrong and why?