QUIZ, MEETING 04

LINEAR ALGEBRA SECTION 01, SPRING 2014

Problem 1. Express the matrix-vector product below as a linear combination of vectors.

$$\begin{pmatrix} \pi & 1 & -e \\ 7 & 7 & 7 \end{pmatrix} \begin{bmatrix} 1 \\ 3 \\ 2 \end{bmatrix} =$$

Problem 2. The result of this matrix-vector product is a vector with three components. The second entry of that result is the equal to the dot product of two vectors which appear somewhere in the set-up. Write down the two vectors.

$$\begin{pmatrix} 2 & 3 & 5 \\ 7 & 11 & 13 \\ 17 & 19 & 23 \end{pmatrix} \begin{bmatrix} 29 \\ 31 \\ 37 \end{bmatrix}$$

Problem 3. Compute the following matrix-vector product.

$$\begin{pmatrix} 2 & 1 \\ 1 & 1 \end{pmatrix} \begin{bmatrix} 2 \\ -1 \end{bmatrix} =$$