Name_____

Mathematics 205: Linear Algebra
Fall Semester 2004
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Quiz #16
October 11

$\begin{bmatrix} 5 & 2 & 4 \\ 0 & 2 & 3 \end{bmatrix}$ is the data matrix for a triangle V in the plane with vertices (5, 0), (2, 2), and (4, 3).

A. Sketch a graph of V.

B. Give a 3 x 3 data matrix for V using homogeneous coordinates.

C. Give a 3 x 3 matrix which first reflects V through the line $x_1 = x_2$
then moves the reflected triangle one unit horizontally and two units vertically.

D. Sketch the image of V under this transformation.