The matrix

$$A = \begin{bmatrix} -2 & -2 & 2\\ 0 & 2 & 0\\ -4 & 0 & 2 \end{bmatrix}$$

has one real eigenvalue. Find this eigenvalue, its multiplicity, and the dimension of the corresponding eigenspace.

The eigenvalue = has multiplicity = and the dimension of the corresponding eigenspace is .

Is the matrix A defective?



The matrix

$$A = \left[ \begin{array}{rrr} -2 & -2 & 2\\ 0 & 2 & 0\\ -4 & 0 & 2 \end{array} \right]$$

has one real eigenvalue. Find this eigenvalue, its multiplicity, and the dimension of the corresponding eigenspace.

The eigenvalue =  $\begin{bmatrix} 2 \\ 1 \end{bmatrix}$  has multiplicity =  $\begin{bmatrix} 1 \\ 1 \end{bmatrix}$  and the dimension of the corresponding eigenspace is  $\begin{bmatrix} 1 \\ 1 \end{bmatrix}$ .

Is the matrix A defective?