

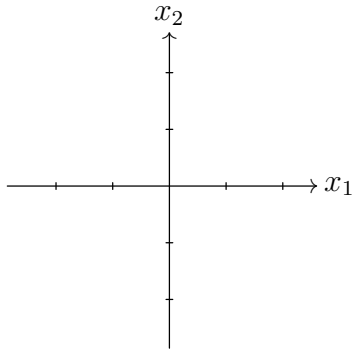
Math 304 Section 1 Quiz 7

7/21/16

Name: \_\_\_\_\_

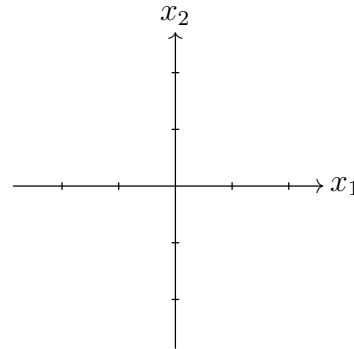
The matrix  $T = \begin{bmatrix} 2 & -2 \\ -1 & 1 \end{bmatrix}$  gives a linear transformation  $T : \mathbb{R}^2 \rightarrow \mathbb{R}^2$ .

1. Mark  $T(\mathbf{e}_1)$  and  $T(\mathbf{e}_2)$  on the graph below.
2. Is the image of  $T$  a point, a line, or a plane?



The matrix  $S = \begin{bmatrix} 2 & 0 \\ 2 & -1 \end{bmatrix}$  gives a linear transformation  $S : \mathbb{R}^2 \rightarrow \mathbb{R}^2$ .

3. Mark  $S(\mathbf{e}_1)$  and  $S(\mathbf{e}_2)$  on the graph below.
4. Is the image of  $S$  a point, a line, or a plane?



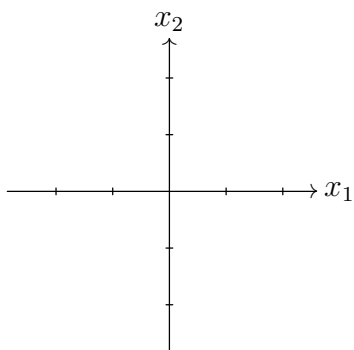
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