

Group \_\_\_\_\_ Scribe \_\_\_\_\_

Other group members \_\_\_\_\_

## Group Quiz for Section 5.1

Let  $\mathbf{T} : \mathbb{R}^2 \rightarrow \mathbb{R}^2$  rotate by  $\theta$  and then multiply the  $x$ -coordinate by 2. What are the singular values of  $\mathbf{T}$ ?

*Hint:* first think of an orthonormal basis which works well with the second part of the map, then reverse the first part of the map to get an orthonormal basis which is simply transformed by  $\mathbf{T}$  itself.