

Vector fields on R^2

- (1) Sketch a picture of the vector field $v : R^2 \rightarrow R^2$ define by $v(x, y) = \langle y, -x \rangle$

- (2) Sketch a picture of the vector field on S^2 described by $v : S^2 \rightarrow R^2$ where $v(x, y) = \langle x, y, 0 \rangle$.

- a. How many zeros does this vector field have?