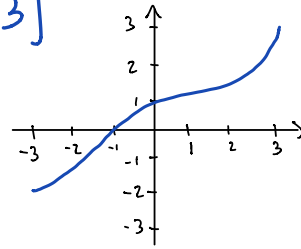


### Question 1

$$f: [-3, 3] \rightarrow [-3, 3]$$

graph of  $f$ .



Which statements are true?

(A)  $f$  is injective

(B)  $f$  is surjective

(C)  $f$  is bijective

(D)  $\text{im}(f) = \{y \in \mathbb{R} \mid y \geq 2\}$

### Question 2

$$f: \mathbb{R}^2 \rightarrow \mathbb{R}^2$$
$$\begin{pmatrix} x_1 \\ x_2 \end{pmatrix} \mapsto \begin{pmatrix} x_1 + x_2 \\ -x_1 - x_2 \end{pmatrix} = \overbrace{\begin{pmatrix} 1 & 1 \\ -1 & -1 \end{pmatrix}}^{[f]} \begin{pmatrix} x_1 \\ x_2 \end{pmatrix}$$

Which statements are true?

(A)  $f$  is injective

(B)  $f$  is surjective

(C)  $f$  is bijective

(D)  $\text{im}(f) = \left\{ \begin{pmatrix} y_1 \\ y_2 \end{pmatrix} \in \mathbb{R}^2 \mid y_1 = -y_2 \right\}$

