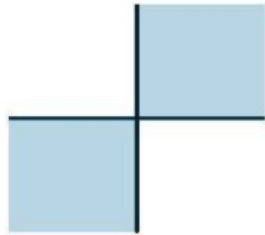


Handwritten HW 12

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2. Assume the set displayed below includes the bounding lines. Give a specific reason why the set H is *not* a subspace of \mathbb{R}^2 . (For instance, find two vectors in H whose sum is *not* in H , or find a vector in H with a scalar multiple that is not in H . Draw a picture.)



Solution:

18. Determine if the set is a basis for \mathbb{R}^2 or \mathbb{R}^3 . Justify your answer.

$$\begin{bmatrix} 1 \\ 1 \\ -2 \end{bmatrix}, \begin{bmatrix} -5 \\ -1 \\ 2 \end{bmatrix}, \begin{bmatrix} 7 \\ 0 \\ -5 \end{bmatrix}$$

Solution: