

Math 231 — Hw 10

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1. Is the following set of vectors from \mathbb{R}^3 a linearly independent set?

$$\{(1, 2, 3), (4, 5, 6), (7, 8, 9)\}$$

Prove or disprove.

2. Remember that vectors are just elements of a vector space. Since P_2 , the space of polynomials up to degree 2, is a vector space, then below is a set of vectors from that space.

$$S = \{2, x - 1, x^2 - x\}$$

Is it true that $\mathbf{span}(S) = P_2$. Prove your answer.