Linear Algebra
C Term, Sections C01-C04
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PRACTICE ONLY – DO NOT HAND IN

Linear Algebra Quiz 5

In each of the following cases, determine whether or not W is a subspace of the vector space P_3. Answer "YES" or "NO" and give sufficient justification for your answer.

(a)

$$W = \{p(t) : p(t) = a_3t^3 + a_2t^2 + a_1t + a_0 \text{ where } a_0a_1 = a_0a_2\}$$

(b)

$$W = \{p(t) : p(t) = a_3t^3 + a_2t^2 + a_1t + a_0 \text{ where } a_1 = a_2\}$$

(c)

$$W = \{p(t) : p(t) = a_3t^3 + a_2t^2 + a_1t + a_0 \text{ where } a_0 = 0\}$$