

Math 304, Section 5 — Quiz 14 – April 3

Name: _____

1. What is the definition of the dimension of a vector space V ?

2. Complete the following definition of linearly independent: A list (v_1, \dots, v_n) of vectors in a vector space V is *linearly independent* if for any scalars c_1, \dots, c_n such that the linear combination

$$c_1v_1 + c_2v_2 + \dots + c_nv_n = \underline{\hspace{2cm}}$$

we have _____.

3. Complete the following definition of the span of a list of (v_1, \dots, v_n) of vectors in a vector space V : The *span* of (v_1, \dots, v_n) is the set of all vectors of the form

$$\underline{\hspace{4cm}}$$

where a_1, a_2, \dots, a_n are any _____.