

Math 411 Spring 2016 Homework #2

Due Feb. 9, Tue in class

1. Textbook, 1.C, page 24: 1, 7, 8, 10;
2. Let F be a field. Find all subspaces of $V = F$ (over F), i.e., $V = F^1$.
3. Show that there are finitely many subspaces of \mathbb{R}^2 .

More practice problems: *Do not submit*

1. Textbook, 1.C, page 24: 12, and give an example where the union of two subspaces of V is *not* a subspace of V .
2. Show that the set of all real-valued univariate continuous functions on $[0, 1]$, denoted by $C[0, 1]$, is a vector space under the usual addition and scalar multiplication.