Homework Assignment 2 — Partial Solutions

These problems are for your practice, based on Sections 1.3 and 1.4. We recommend completing all of them and we welcome you to come to Homework Hangouts to work on them with others. You are not required to hand them in. If you would like to have more questions for practice, we recommend using the problems from the back of Sections 1.3 and 1.4 of the book.

Learning Goals

B1. Given a statement of the form, *"A if and only if B"*, prove that it is true by proving first that A implies B and then that B implies A. (1.2)

B2. Determine if a given vector is a **linear combination** of vectors from a set. (1.3)

B3. Interpret a given **span** of vectors geometrically, algebraically, and/or verbally, in the context of examples. (1.3)

B4. Prove that two sets W and V are equal by showing that W is a subset of V and V is a subset of W. (1.3)

B5. Find the **sum** of two subspaces in the context of examples. (1.3)