## Homework 9–21-241 Lec3, Matrices and Linear Transformations

**Instructions:** Complete the following problems, clearly labeling the problems. Staple this sheet, with your name and section filled in, to the top of your work. Failure to attach this sheet will result in a three-point deduction in the grade. The assignment will be graded out of fifty points.

DUE: Wednesday, April 19, 2017

## **Book Problems**

- Section 6.1: 34, 36, 48, 49, 56, 58, 60, 64
- Section 6.2: 4, 8, 28, 30, 34, 52, 58
- Section 6.3: 2, 4, 16, 18, 22

## **Other Problems**

1. Let  $S = {\mathbf{v}_1, \dots, \mathbf{v}_k}$  be a set of vectors in vector space V. Show that S is linearly dependent if and only if one of the vectors in S is a linear combination of the other vectors in S.