HOMEWORK 4 - MATH340A

DUE: WEDNESDAY FEBRUARY 6TH

Notation: The book uses a slightly different notation that the one we have been using in class. In particular given a linear transformation $T : V \to W$ and bases $\mathcal{A}$ and $\mathcal{B}$ of V and W respectively, the matrix representation of T, that we indicated by $[T]_{\mathcal{B},\mathcal{A}}$ is denoted $[T]^{\mathcal{B}}_{\mathcal{A}}$ in the book. Moreover, given two linear transformation T_1 and T_2 such that $\operatorname{codom} T_1 = \operatorname{dom} T_2$ in class we denoted the composition by $T_2 \circ T_1$, while in the book this is denoted by T_2T_1.

In the exams and in the homeworks you can use either notation, however I suggest that if you have to choose you use the one we introduced in class.

(1) FIS 2.3 - ex 3

(2) FIS 2.3 - ex 4

(3) FIS 2.3 - ex 11

(4) FIS 2.3 - ex 16

(5) FIS 2.4 - ex 3

(6) FIS 2.4 - ex 13

(7) FIS 2.4 - ex 19

(8) FIS 2.4 - ex 24

(9) FIS 2.5 - ex 2 (c) and ex 3 (c)

(10) FIS 2.5 - ex 9

FIS = Friedberg-Insel-Spence, 4th Edition.