

M341 (56140), Homework #13

Due: 11:00am, Tuesday, Dec. 11

*Instructions: Questions are from the book "Elementary Linear Algebra, 4th ed." by Andrilli & Hecker. Please show all your work, not only your final answer, to receive credit. Keep answers organized in the same order the problems have been assigned.*

**Dimension theorem (5.3)**

p. 345-349, #3(c), 4(h,j)

**One-to-one and onto linear transformations (5.4)**

p. 354-356, #5

**Isomorphism (5.5)**

p. 366-371, #3

**Diagonalization of linear operators (5.6)**

p. 386-389, #4

In addition:

- A) Which of the linear transformations in Section 5.3, #3(c), 4(h,j), are one-to-one? Which are onto? Are any of these isomorphisms?
- B) Complete the sample final exam posted online and attach your work.