

UH - Math 4377/6308 - Dr. Heier - Fall 2010
HW 5
Due 09/29, at the beginning of class.

Use regular sheets of paper, stapled together.
Don't forget to write your name on page 1.

1. (2 points) Section 1.6, Problem 31 (To prove (b), you **must** use induction. Do **not** just cite Problem 29 on the same page to prove (b).)
2. (1 point) Section 2.1, Problem 1 (Just say true or false, no further explanation necessary.)
3. (1 point) Section 2.1, Problem 3
4. (1 point) Let $T : \mathbb{R}^5 \rightarrow \mathbb{R}^3$, $T(a_1, a_2, a_3, a_4, a_5) = (a_1 + 2a_2 - a_3, -a_2 + 3a_3, -a_1 - a_2 - 2a_3)$. Find bases for the kernel and range of T .
5. (1 point) Section 2.1, Problem 10
6. (1 point) Section 2.1, Problem 11
7. (1 point) Section 2.1, Problem 13
8. (1 point) Section 2.1, Problem 14
9. (1 point) Section 2.1, Problem 17
10. (1 extra credit point) Section 2.1, Problem 37