

UH - Math 4377/6308 - Dr. Heier - Fall 2011
HW 4
Due 09/21, 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 1.4, Problems 2(b), 2(c), 2(e), and 2(f). (You may use any method you like to solve the systems. Just make sure that you provide all details and that your answer is correct.)

2. (1 point) Section 1.4, Problems 3(c), and 3(d).

3. (1 point) Which vectors (a, b, c) are in $\text{span}(\{(2, 1, 4), (1, 0, 1), (3, 1, 5)\})$?

4. (1 point) Section 1.4, Problem 12.

5. (1 point) Section 1.5, Problem 1. (Just say true or false, no further explanation necessary.)

6. (1 point) Section 1.5, Problem 3.

7. (1 point) Can 8 vectors in \mathbb{R}^7 be linearly independent? Justify your answer with an argument about solutions of homogeneous systems of linear equations.

8. (1 point) Section 1.6, Problem 7.

9. (1 point) Section 1.6, Problem 9.

10. (1 extra credit point) Section 1.5, Problem 20.