Math 43, Survey of Linear Algebra

Fall 2007

B. Dodson

1. Course Info

2. Week 1 Homework: first day

Graded homework 1 will be due and collected on Monday, Sept. 3, consisting of

pg. 56 - #3 and pg. 26 - #20

(show your work, not just the answer).

Suggested homework 1 will be due on Wednesday, Sept. 5, consisting of the problems on graded hw 1 plus

1.1 - 5d, 7, 10, 11, 19, 21; 1.2 - 2, 9, 30.

Problems on the suggested homework, but not on the graded homework are not collected, but will be used for quiz and exam topics.

corrected versions!

3. Office Hours: Mon, Fri: 12:15 - 1:15 and

Tues: 11:30-12:30 and by appt. (email: bad0)

Second day.

4. Problem 5(a), Section 1.1, pg. 13:

If A and B are the points $A = (1, -1), B = (4, 2)$

draw the vector $\overrightarrow{AB}$ then compute

and redraw $\overrightarrow{AB}$ as a vector in standard position.

Solution: $\overrightarrow{AB} = \overrightarrow{OB} - \overrightarrow{OA}$,

where $O = (0, 0)$ is the origin. Sketch!

(continued ...)

$$\overrightarrow{AB} = \overrightarrow{OB} - \overrightarrow{OA}$$

$$= [4, 2] - [1, -1] = [4 - 1, 2 - (-1)] = [3, 3].$$

(Sketch of $\overrightarrow{AB} = \overrightarrow{OC}$ for $C = (3, 3)$.)

5. linear combinations, standard cordinates and new coordinates.

We also covered 1.1 - #11, 20, pg. 14

6. dot product, right angles and orthogonal vectors.

We also started Section 1.2 and covered 1.2 - #1.