MA 237-02 §4.1 - 5.2	Quiz #5	score	Name: 9 November 2001
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INSTRUCTIONS: Work the following problems on your own paper and turn them in no later than Thursday morning 11/15/01.

- 1. Find the coordinates of the point (1,2,3) in the basis of \mathbb{R}^3 given by the vectors $(1,0,1)^t$, $(2,1,2)^t$, $(0,3,1)^t$. (4 points)
- 2. The three vectors (1, 1, 1, 0), (2, 0, 0, 1), and (0, 2, 1, 3) span a 3-dimensional subspace of \mathbb{R}^4 . Find an orthonormal basis for this subspace. Then find an orthonormal basis for \mathbb{R}^4 that includes these three vectors. *(4 points)*
- 3. Work problem 1(e) on page 287. (4 points)
- 4. Work problem 12 on page 288. (4 points)
- 5. Work problem 13 on page 288. (4 points)