

**Math 1300 Fall 2013**  
**Monday September 13 2013**  
**Exercises**

1. Use the Gauss Jordan method to compute the inverse of the matrix:

$$\begin{bmatrix} 1 & -3 \\ 0 & 1 \end{bmatrix}$$

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2. Use the Gauss Jordan method to compute the inverse of the matrix:

$$\begin{bmatrix} 1 & 3 & 1 \\ -1 & 2 & 0 \\ 2 & 11 & 3 \end{bmatrix}$$

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3. Use matrix inversion to solve the system of linear equations:

$$\left\{ \begin{array}{ccccccc} & & y & + & 2z & = & 1 \\ 2x & + & y & + & 3z & = & 2 \\ x & + & y & + & 2z & = & 3 \end{array} \right\}$$

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4. One hundred randomly selected college freshmen were asked whether the college they were attending was their first choice, their second choice, or neither. Students reported that they either attended their first choice college, attended their second choice college, or attended a college that they ranked below their first and second choices. The number of students who attended their first choice college was 16 more than the number who did not. The number of students who attended their second choice college was 46 less than the number of students who did not. Let  $x$ ,  $y$  and  $z$  represent the numbers of students who attended their first choice college, second choice college, and neither, respectively. Use the methods of this section to determine the values of  $x, y, z$ .