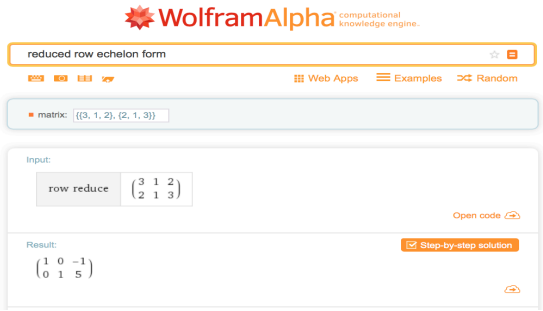
Math 2270-004
Homework due January 31.

Recall that problems which are not underlined are good for seeing if you can work with the underlying concepts; only the underlined problems need to be handed in. The Wednesday quiz will be drawn from all of these concepts and from these or related problems.

Note: If you are confident in your ability to compute reduced row echelon form of matrices you may use technology to do those computations - for any unaugmented matrix with more than 9 entries, and any augmented matrix with more than 12 entries. There are some problems in this assignment with fairly huge matrices where you should definitely use technology. Wolfram alpha, on your browser, will do these computations. Here's a screen shot that shows the syntax. If you do use technology, just copy the resulting reduced row echelon form and say which technology you used.



1.7 Linear independence/dependence and the connection between this concept and homogeneous matrix equations $A\,\underline{\mathbf{c}} = \underline{\mathbf{0}}$.
1, **5**, 7, **15**, **17**, **21**, **27**, **28**, **31**, **39**, **42**.

1.8 Matrices represent special functions between Euclidean spaces, called "linear transformations."
3-15 odd, **16**, 21, **23** **27**, **37**, **39**.

1.9 All linear transformations $T : \mathbb{R}^n \rightarrow \mathbb{R}^m$ *are matrix transformations.*
1, **3**, **7**, **13**, **19**, **27**, **35**, **39**

2.1 Matrix operations, including matrix multiplication
1, **3**, **9**, **11**, **23**, **25**, **27**