Review is important, so here is some review for the test. It will cover Sections 1.1, 1.3, 1.4, 2.1-2.3, and 3.1-3.3 through page 92. This sheet is pretty comprehensive, so concentrate on the areas you are least comfortable with!

First, a list of the topics which will be covered.

- Linear functions; what they are, how to find them from data
- Matrices; what they are, how to add and multiply them, how to move between matrix equations and linear equations, echelon and reduced echelon forms
- Linear programming/optimization; how to get from linear inequalities to a polygon, how to find maxima and minima (corner principle), and how to get inequalities from word problems
- Vectors in $\mathbb{R}^2$ and $\mathbb{R}^3$; definitions, addition, multiplication, geometric meaning
- Geometry in $\mathbb{R}^2$ and $\mathbb{R}^3$; using and finding both $X, Y, Z$ and parametric forms for both lines and planes, whether through the origin or not, using vectors to help, intersections, geometric meaning of solutions of systems of linear equations
- Systems of Linear Equations; solving them in various ways, representing solutions, solving using augmented matrices, Gaussian elimination, echelon and reduced echelon form of systems and matrices

Problems and examples from the text which are especially important to understand:

**Chapter 1.1:**Defs., pp.2 and 5; Method, p.6; Probs. 1, 2, and 4
**Chapter 1.3:**Defs., pp.21 and 23; Ex., p.24; Probs. 1 and 3
**Chapter 1.4:**Description, pp.32-34; Thm., p.34; Probs. 3, 4, and 7
**Chapter 2.1:**Defs., p.44-45; Probs. 2, 4, and 6
**Chapter 2.2:**Descriptions, pp.49-51; Probs. 1 and 3
**Chapter 2.3:**Descriptions, pp.56-60; Ex., p.60; Probs. 1, 4, and 8
**Chapter 3.1:**Def., p.74; Def., p.75; Pic., p.78; Probs. 2 and 6
**Chapter 3.2:**Def., p.81; Thm., p.84; Ex., p.85; Pic., p.86; Probs. 2 and 6
**Chapter 3.3:**Ex., p.91; Def., p.92