Math 105 Topics for Test 2

Next to each topic are problems from the **Chapter 1 Test on page 135** or the **Chapter 2 Test on page 237** of the Textbook. Also study the homework problems. A complete list of the homework problems is on the course webpage.

- Find the midpoint of a line segment and the distance between two points (**Ch Test 1: 17a-d**)
- Find the center and radius from the equation of a circle (**Ch Test 1: 18**)
- Linear equations
    - Graph the solution and find the x and y intercepts (**Ch Test 1: 19**)
    - Find the slope of a line (find slopes of parallel and perpendicular lines)
    - Write the equation of a line (**Ch Test 1: 20**)
- Functions
    - Function notation, Domain and Range (**Ch Test 2: 2**)
    - Evaluate Piecewise functions (**Ch Test 2: 7a**)
    - Difference Quotients
- Graphs of Functions
    - Read Domain and Range from the graph
    - Graph a Piecewise Function (**Ch Test 2: 7b**)
- Increasing and Decreasing Functions
    - From the graph find the intervals on which a function is increasing/decreasing
    - Find the average rate of change of a function on an interval (**Ch Test 2: 3)**
- Transformations
    - Vertical and Horizontal shifts (**Ch Test 2: 4b, 5)**
    - Reflections about the x axis, reflections about the y axis
- Quadratic Functions
    - Put equation in standard form to sketch the graph (**Ch Test 2: 6a, b)**
    - Find the vertex of a quadratic function and identify it as a minimum or maximum. (**Ch Test 2: 6c)**