One hour Practice Exam, MAT172, Fall 2005

Exam I on Wed 9/28 will cover A.1-A.6, 1.1-1.7, This covers only A.1-1.3

The answers and homework are on the Webpage.

1. a) Plot the line of slope 4 through (1,8).
   b) What is its y intercept?
   c) Write the point slope formula for this line.
   d) Solve the formula for y and check the slope and y intercept.
2. a) Solve $-3x + 6 \geq 0$.
   b) Then graph $y = -3x + 6$.
   c) What is the slope?
   d) Where is $y \geq 0$?
3. a) What is $(-\infty, 5] \cap (0, \infty)$?
   b) If $x \leq 5$ and $x > 0$, draw the location of values for x on the real line.
   c) If $|x| > 4$, draw the location of values for x on the real line.
   d) If $|x - 3| > 1$, draw the location of values for x on the real line.
4. Factor $x^2 - 6x + 8$ and then solve $x^2 - 6x + 8 \leq 0$. Write your answer on the number line and in set theory notation.
5. Complete the square for $x^2 - 6x + 8 > 0$ and solve $x^2 - 6x + 8 > 0$. Write your answer on the number line and in set theory notation.
6. a) Plot the graph of $(x - 3)^2 + (y - 2)^2 = 4$.
   b) Where does it hit the x axis?
   c) Solve for y.
   d) Is this a function for y in terms of x?
   e) Let $y = f(x) = -\sqrt{4 - (x - 3)^2} + 2$. Verify this solves the formula in (a).
   f) What is the domain of this function?
   e) Plot this function.
   f) Use the graph to determine the range of the function.