18.701 Problem Set 8

Because of the quiz on November 6, this assignment is due Wednesday, November 13.

1. Chapter 7, Exercise 8.6. (groups of order 55)

2. Use the Todd-Coxeter Algorithm to determine the order of the group generated by two elements $x, y$.
   - (a) with relations $x^3 = 1$, $y^2 = 1$, and $= yxyxy = 1$.
   - (b) with relations $x^3 = 1$, $y^4 = 1$, and $xyxy = 1$.

   Be careful. Any error will collapse the group. I recommend practicing on some simpler relations first.

3. Chapter 7, Exercise M.1. Classify groups generated by two elements $x, y$ of order two.
   The element $z = xy$ is useful for this.