Math 213
Construction Rules

1. You must start with whatever is given to you (lines, angles, points, etc.)
2. Arcs are portions of circles but require a point to start with. The center of a circle is the one point that could be moved around where you may wish.
3. New points may be created wherever circles, arcs, lines, rays, or line segments meet. You must use a compass or straightedge to create the new points... you may not just put a new point somewhere and claim it has properties that you have not shown.
4. If you want to measure an exact distance, you must use the compass with a fixed radius setting to do it. This will guarantee it is exactly the same distance.
5. You may not use the ruler for distances. Treat your straightedge as *only* a straightedge.

Definition 0.1. *Two objects A and B are* similar*, denoted $A \sim B$, if it is possible to transform one onto the other by a sequence of rigid motions followed by a size transformation.*

Definition 0.2. *Two objects A and B are* congruent*, denoted $A \cong B$, if it is possible to transform one onto the other by a sequence of rigid motions.*