Homework five, due Wednesday, October 29.

1. On page five of the notes on Betweenness and the Continuity Axiom there are three places where it says “Simple exercise for the reader”. Do these exercises.

2. Suppose $L$ is a line and $\tau$ is a motion. Show that

$$\rho_{\tau[L]} = \tau \circ \rho_L \circ \tau.$$ 

3. Suppose $o$ is a point and $\tau$ is a motion. Show that

$$\alpha_{\tau(o)} = \tau \circ \alpha_o \circ \tau.$$ 

4. Suppose $S$ and $T$ are rays with a common origin. Define the rotation that carries $S$ to $T$. 