# ME 2210 Dynamics: Working Model Homework 05b

### Kinematics of Rigid Bodies: Motion Relative to a Rotating Reference Frame
Problem 15-150 from the Handouts

15.150 and 15.151 Two rotating rods are connected by slider block P. The rod attached at A rotates with a constant angular velocity ω_A. For the given data, determine for the position shown (a) the angular velocity of the rod attached at B, (b) the relative velocity of slider block P with respect to the rod on which it slides.
 **15.150** $b = 8$ in., $\omega_A = 6$ rad/s.
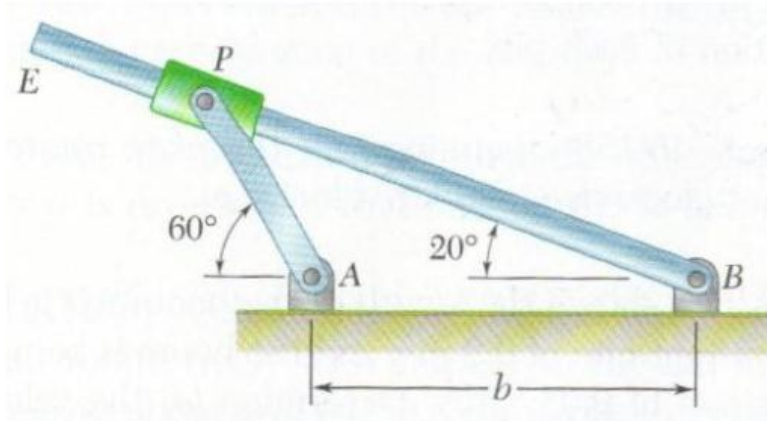
Open Working Model. Place small circles at x = 0, y = 0, and x = 8 inches, y = 0. Anchor both circles in place. Create two thin rectangles, and place the end of one rectangle on the first circle and the end of the second rectangle on the second circle. Set the angles of the rectangles to 60 and 20 degrees, respectively.
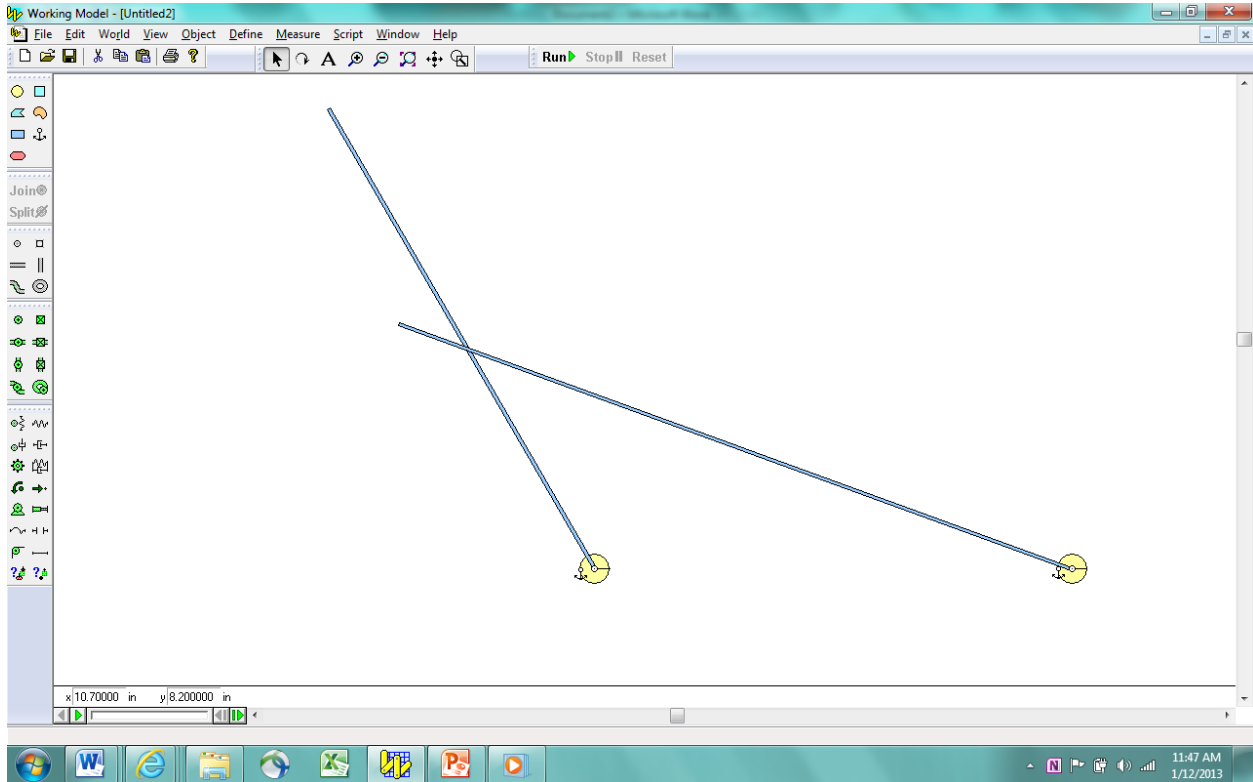
Place a Slot Joint at the intersection of the two rectangles such that it aligns with rectangle B.
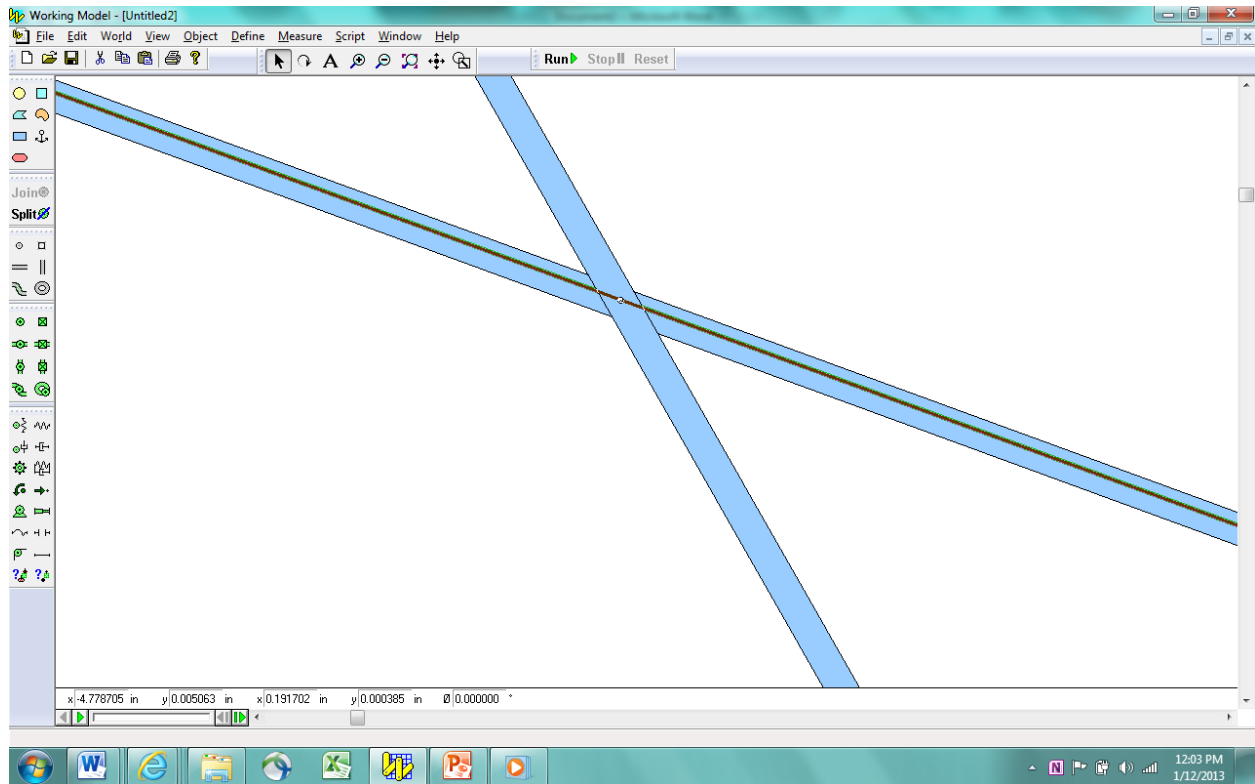
Place a motor on the pin joint at point A. Set the rotational velocity to 6 rad/s.
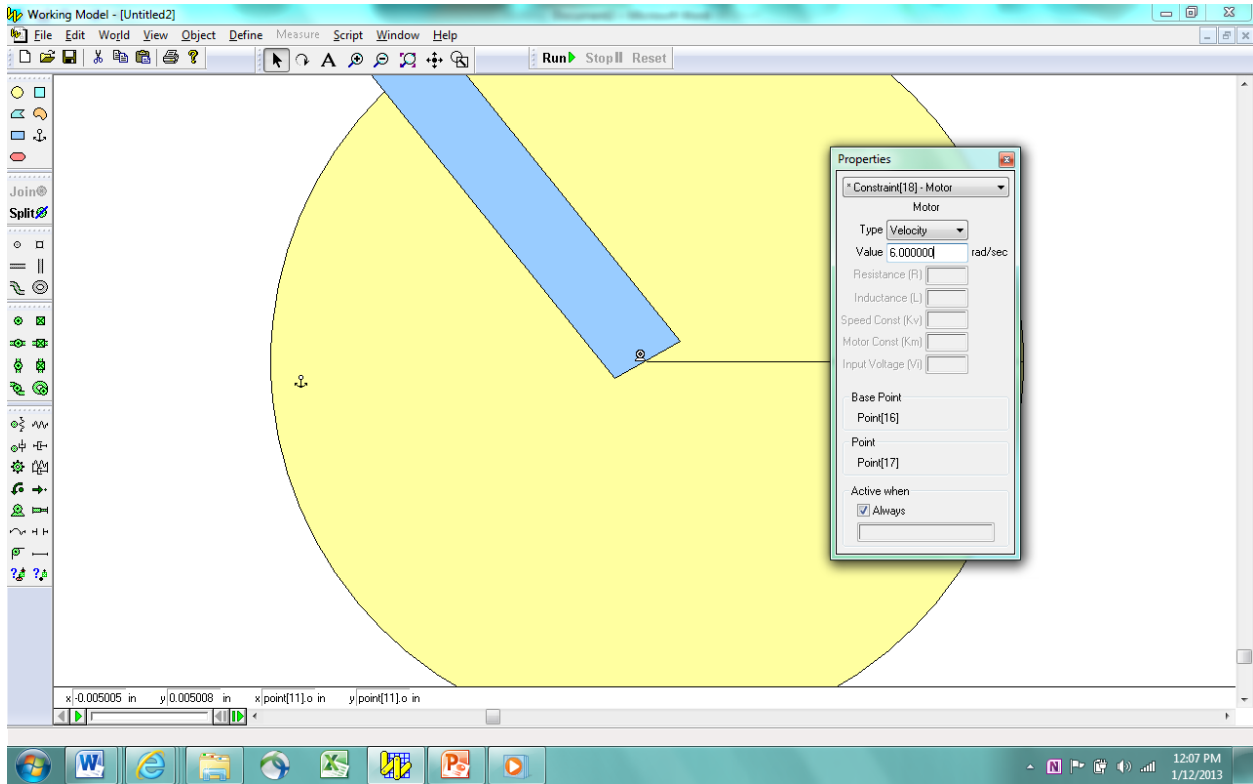
Place the appropriate graphs on the panel. Run the simulation and note the values. Place your name onto the panel using the Text Tool. Take a screenshot of your simulation and place it in the Dropbox Folder entitled, "myname WM Homework 05b. Save your simulation for your records.

Answer: