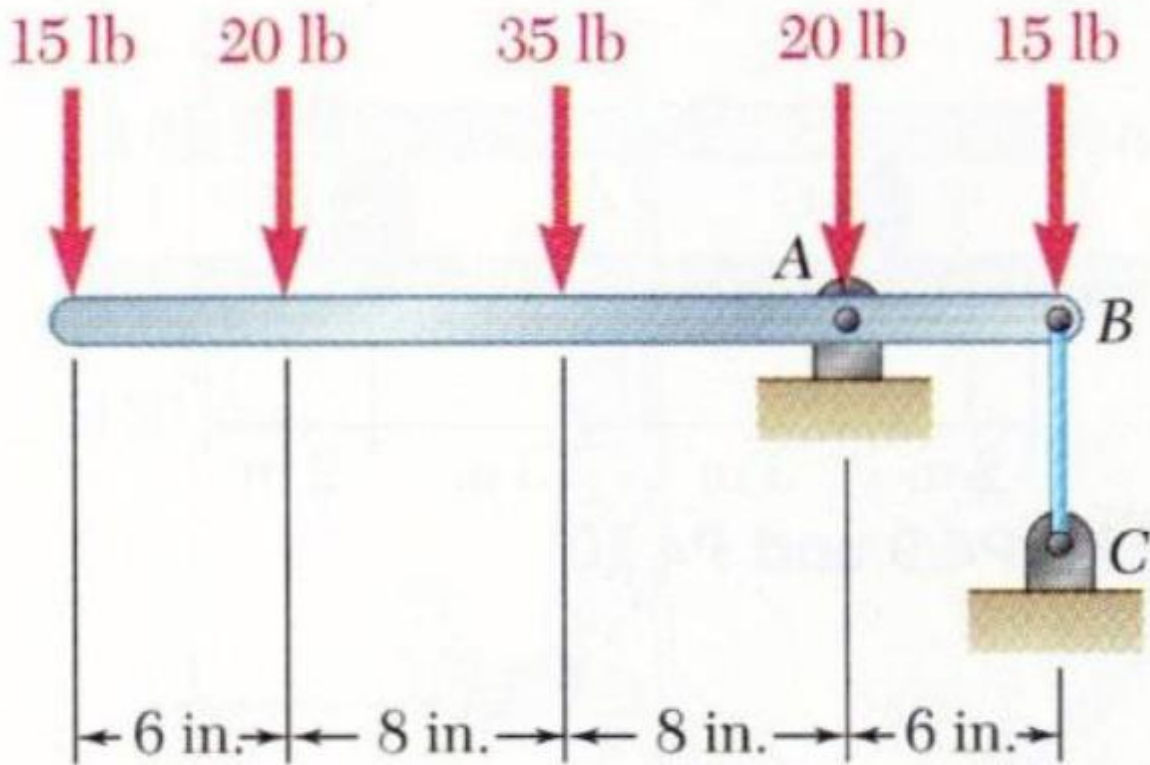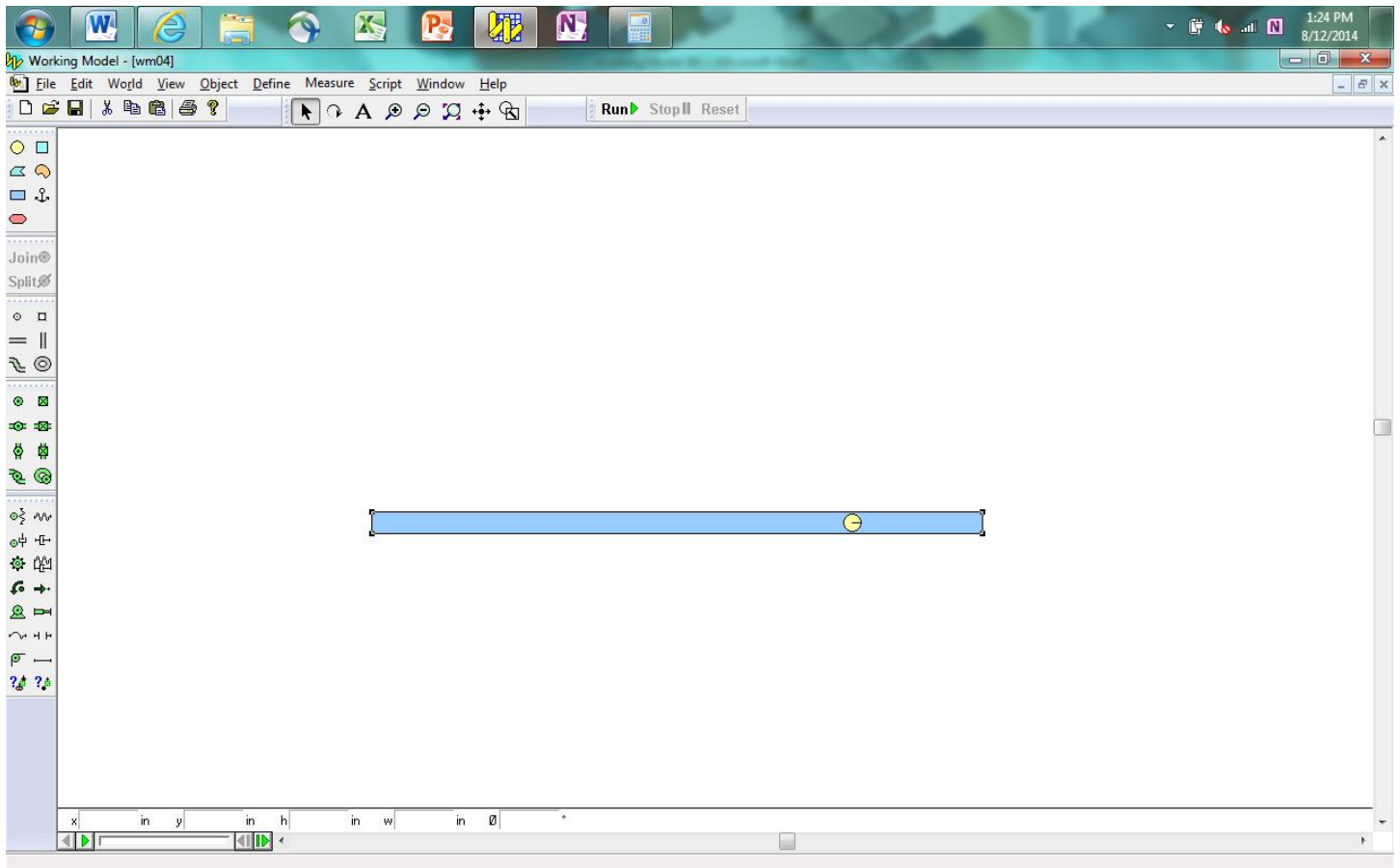**4.4** For the beam and loading shown, determine (*a*) the reaction at *A*, (*b*) the tension in cable *BC*.


Fig. P4.4

Place a small circle at point A (0,0). Change the units to English. Create a slender rectangle of length 28 inches. Locate the center of the rectangle at (-8,0).

Place a Pin Joint on the center of the circle to lock the circle to the rectangle. Place two circles to define Point C and a point above A. Anchor the two circles in place. Place circles at the points of application of the forces in the middle of the rectangle. Pin them in place.
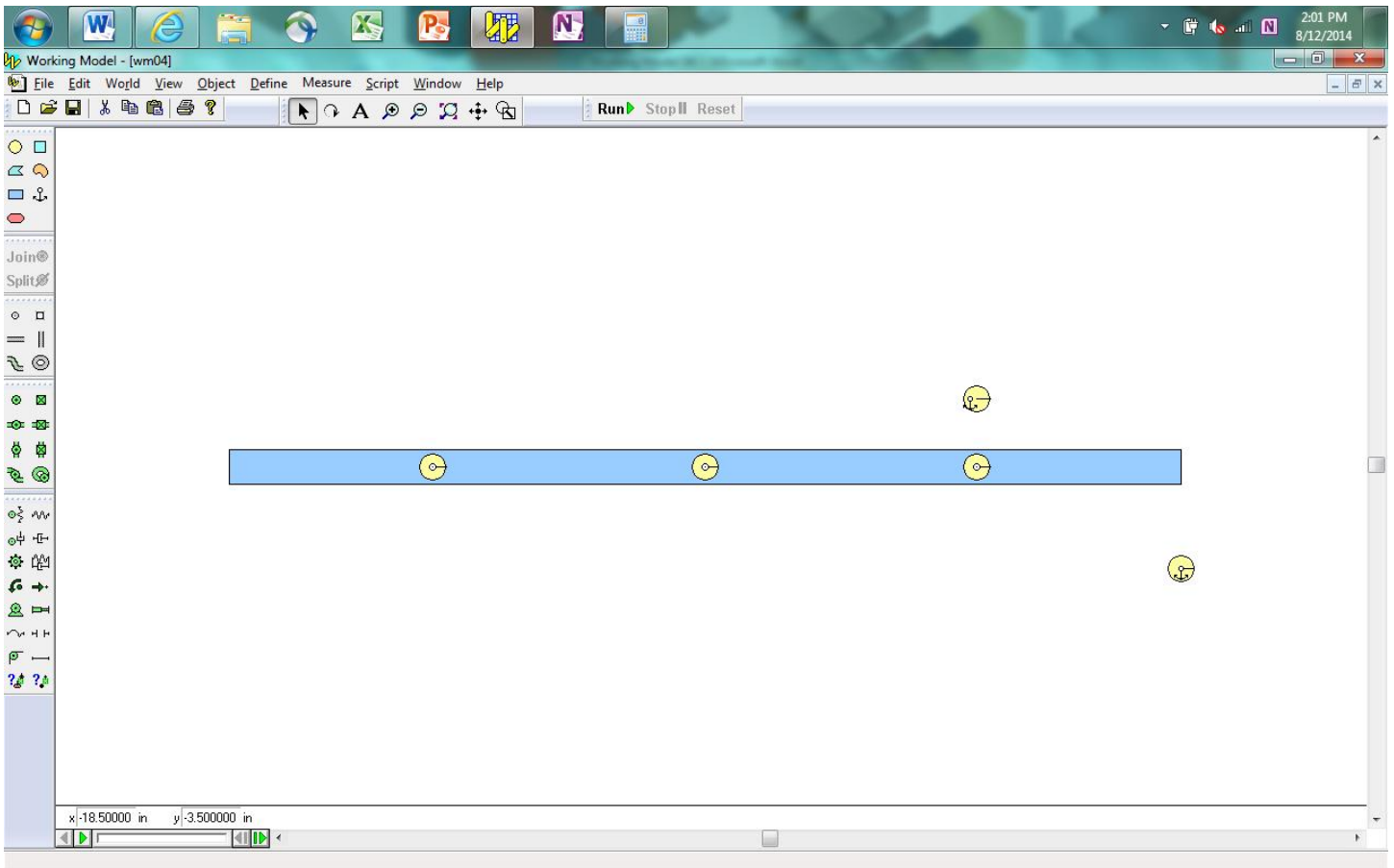
Place a rod between point A and the circle above. This will be used to determine the reaction at point A. Connect point C to the circle below with a rod.
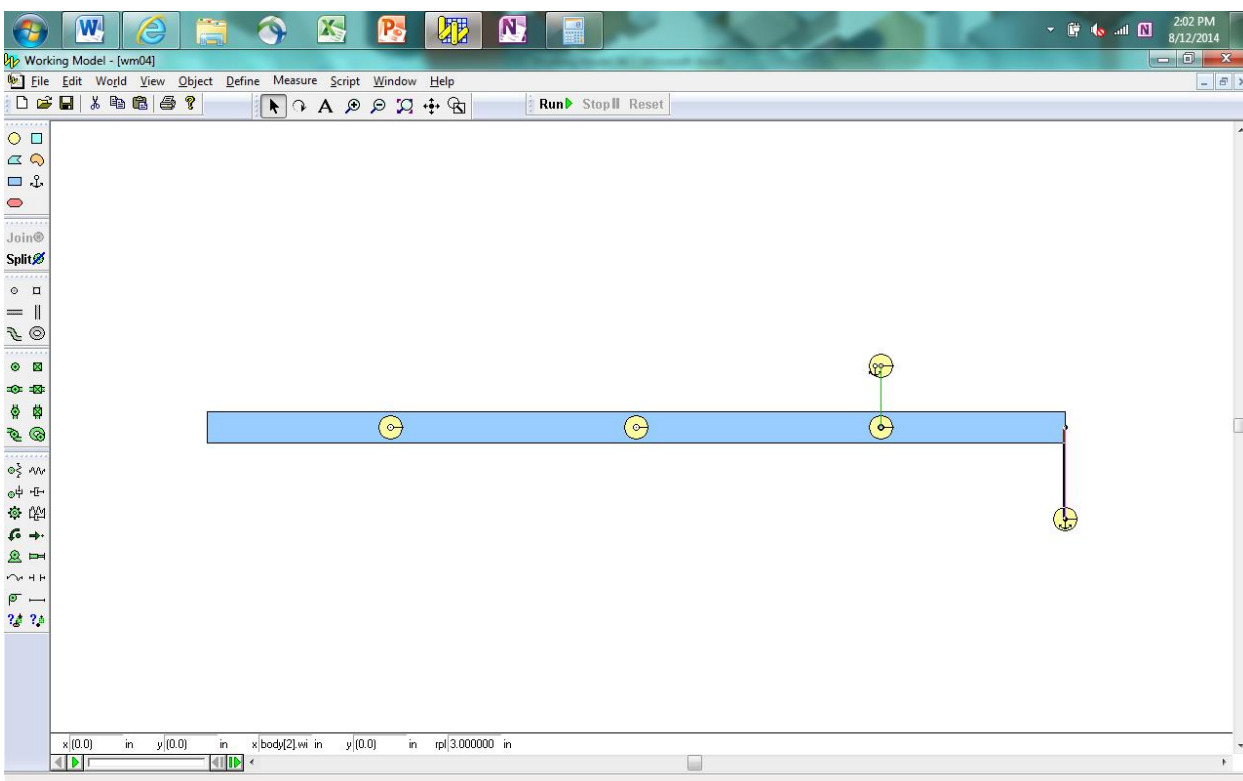
Double-click the rectangle to bring up the Properties dialog box. Set the mass of the rectangle to a small (but nonzero) value.
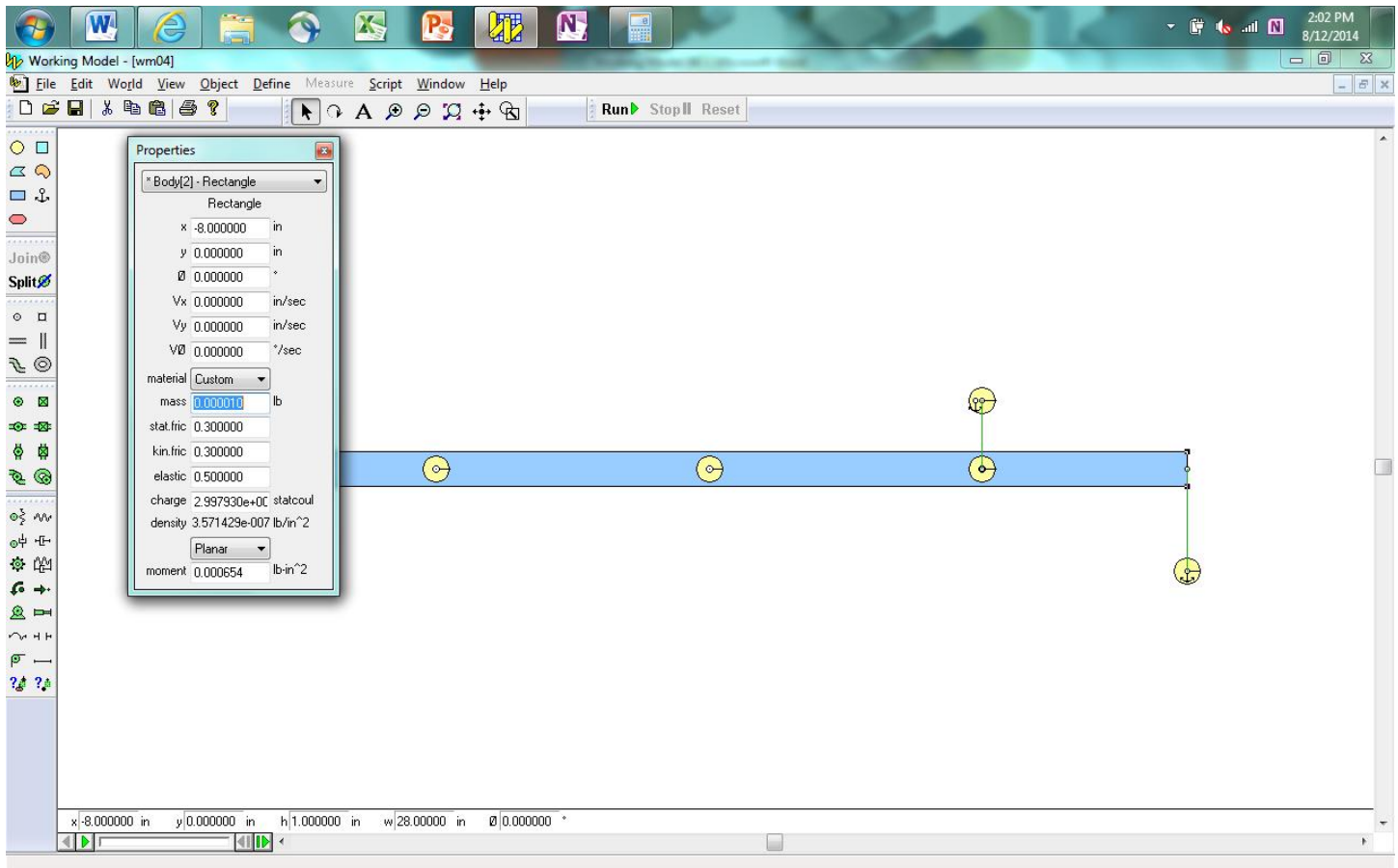
Place the forces at the appropriate locations. Place force output boxes for the two rods. Run the simulation to obtain the solution. It may not be stable while running, so stop the simulation to obtain the values.
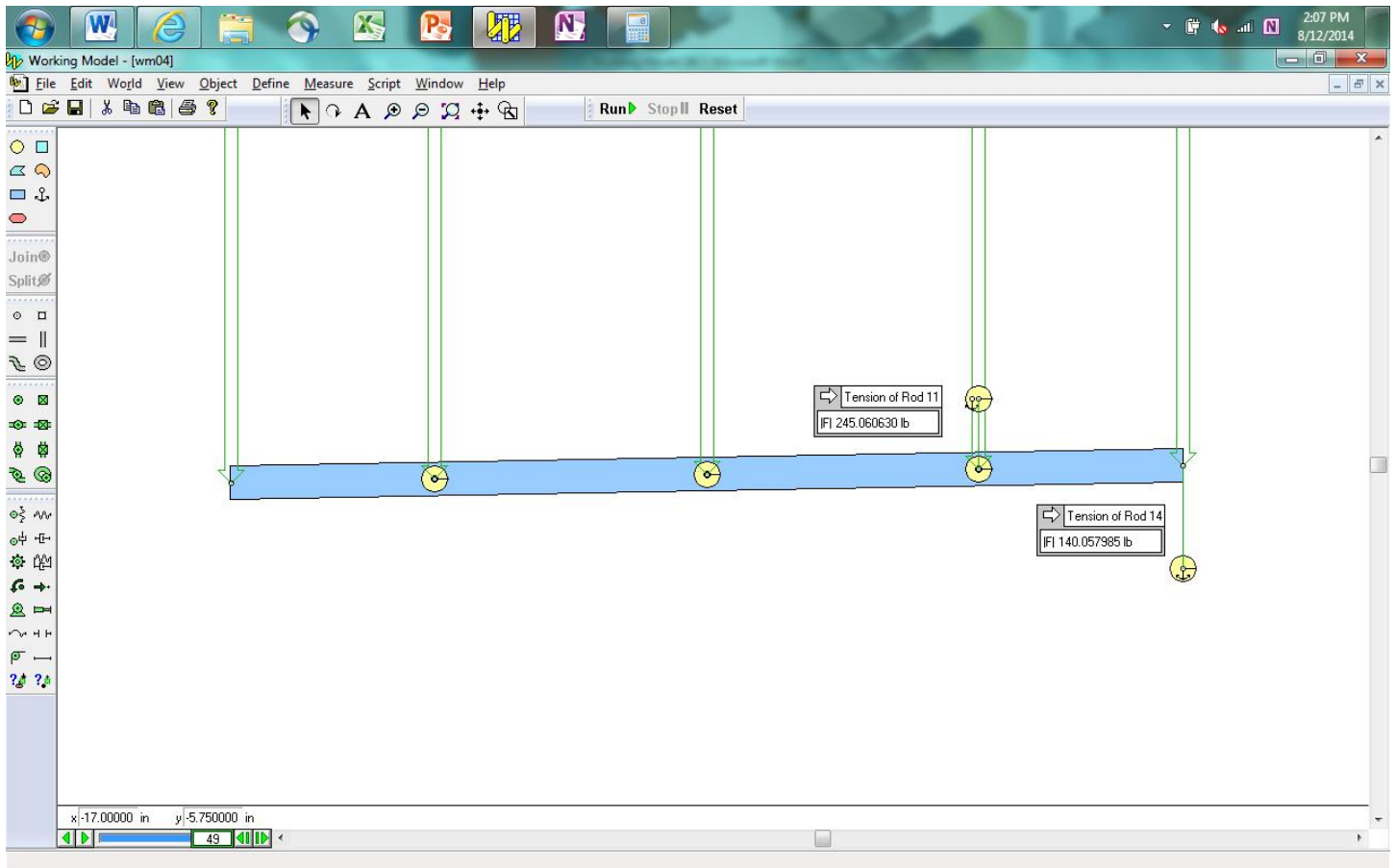
When the results of your model match those shown above, take a screenshot of the model (with numerical values showing), copy and paste it into Microsoft Word, save it as a pdf file, and submit it to the Dropbox in Pilot.