

7.39 through 7.42 For the beam and loading shown, (a) draw the shear and bending-moment diagrams, (b) determine the maximum absolute values of the shear and bending moment.

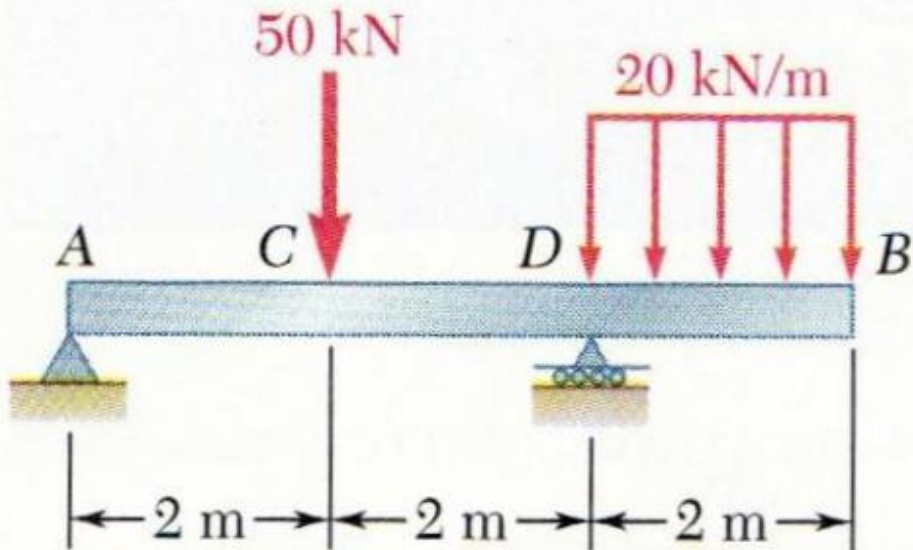
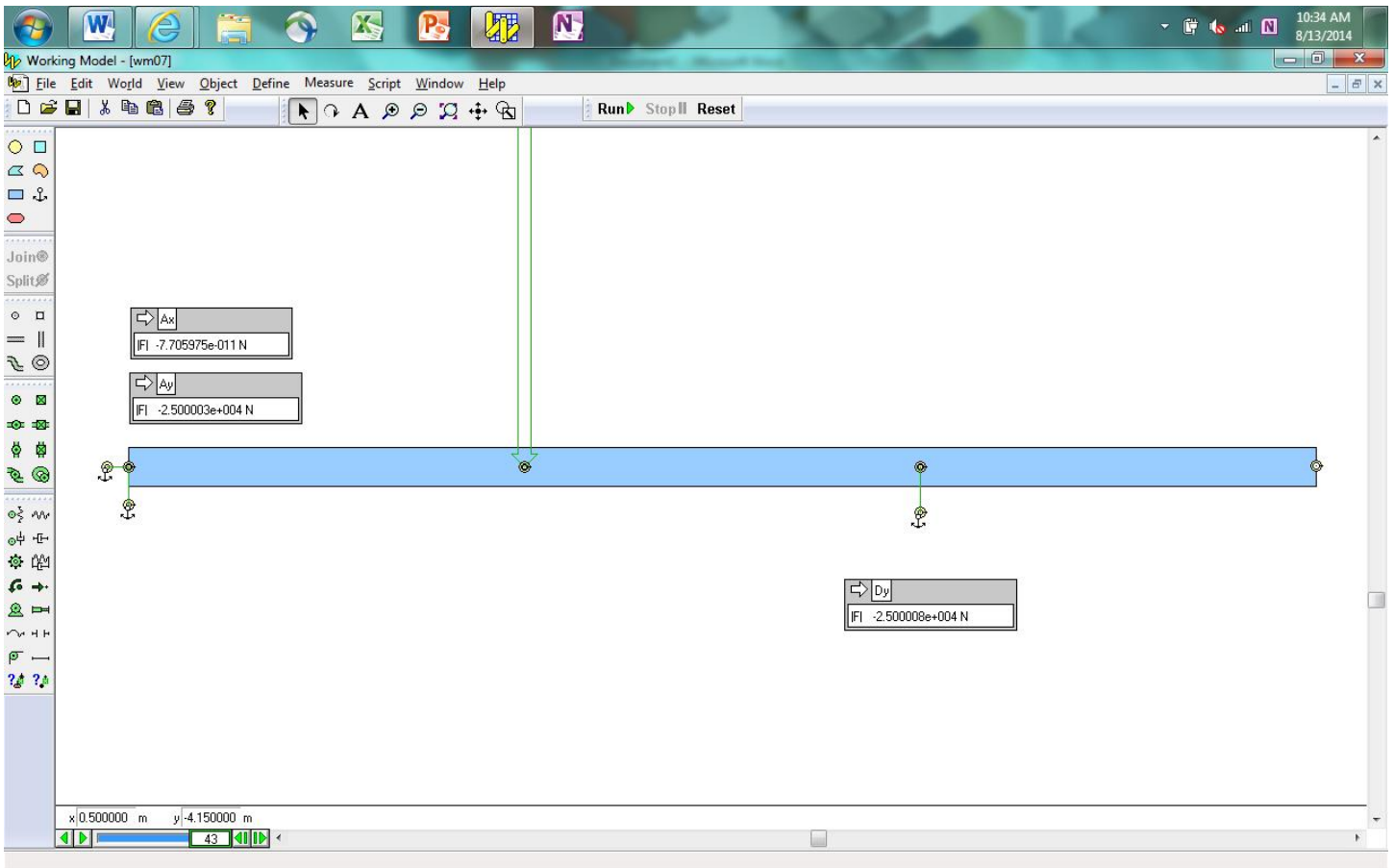
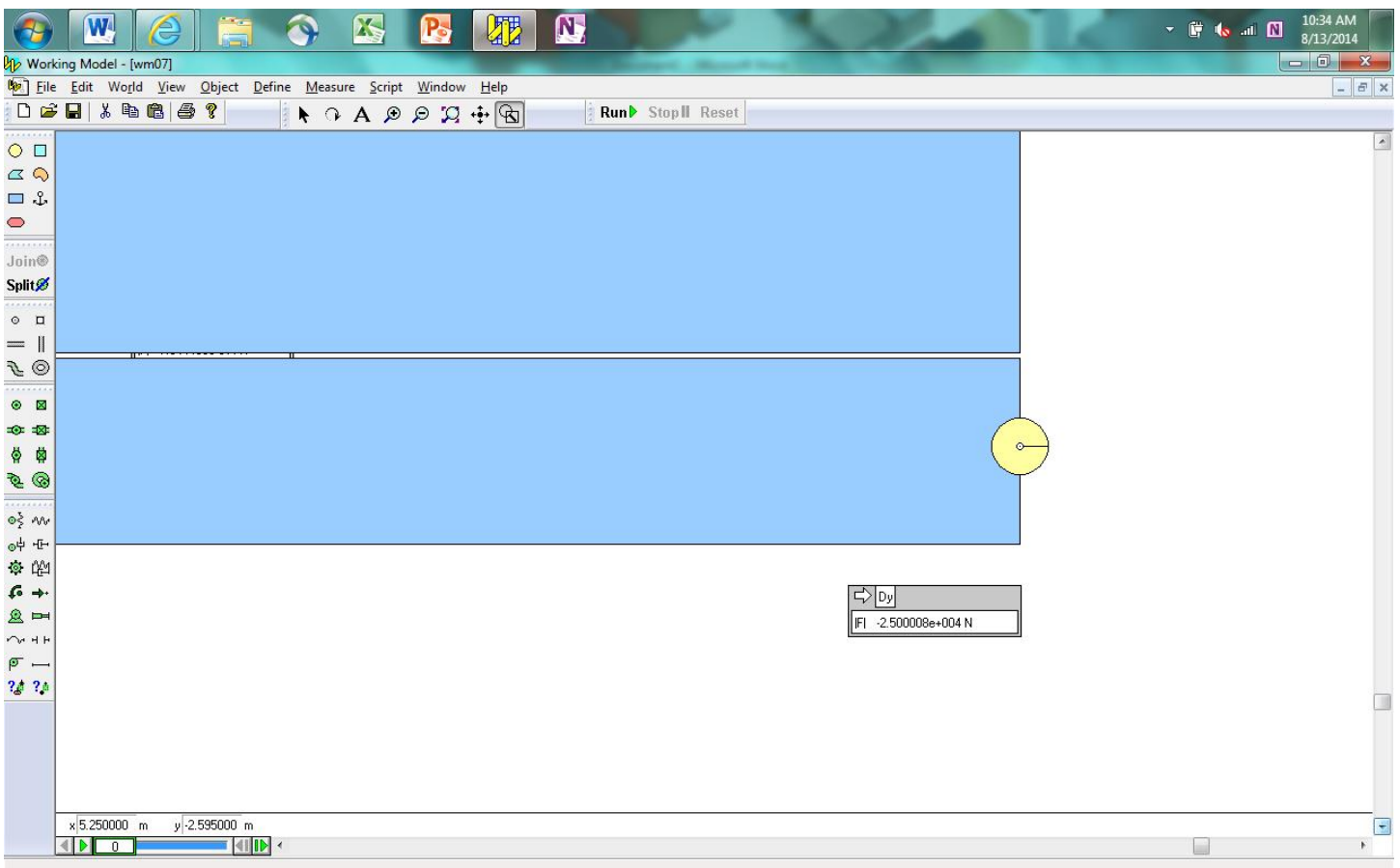


Fig. P7.40

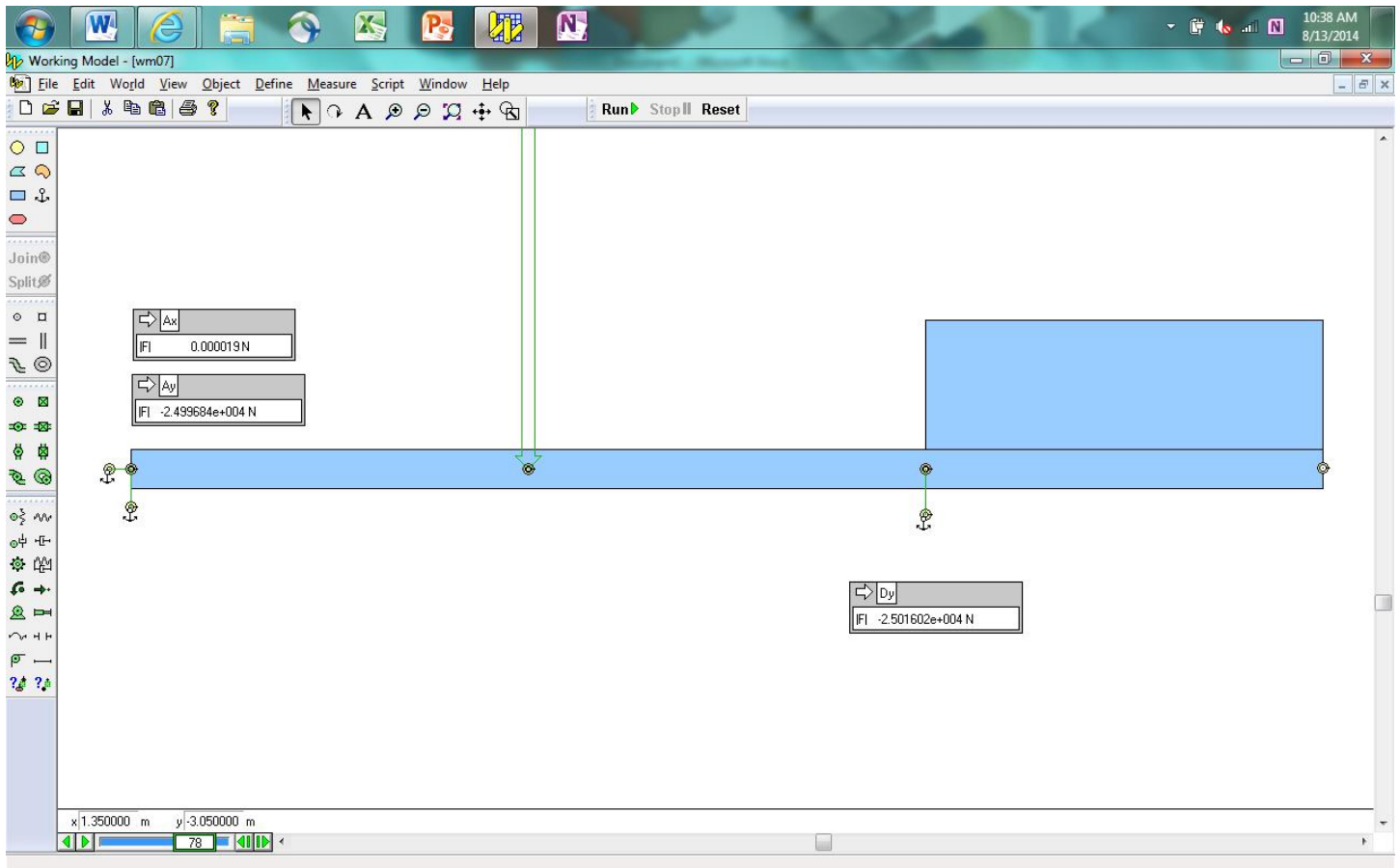
Create the beam, apply the force at point C, and run the simulation to obtain the reaction forces at points A and D as shown below.



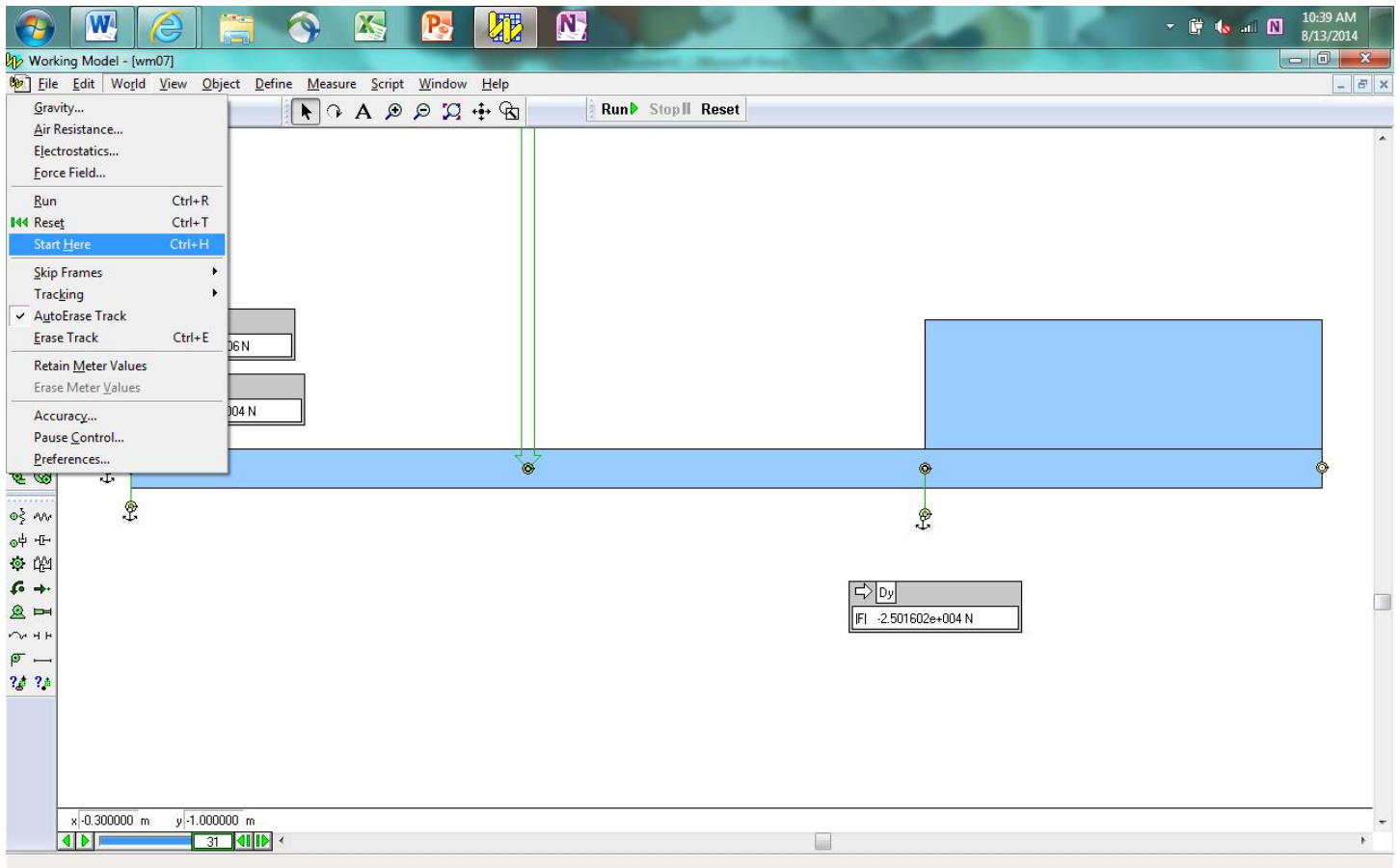
To simulate the distributed load, place a 2-m-long rectangle slightly above the first rectangle.



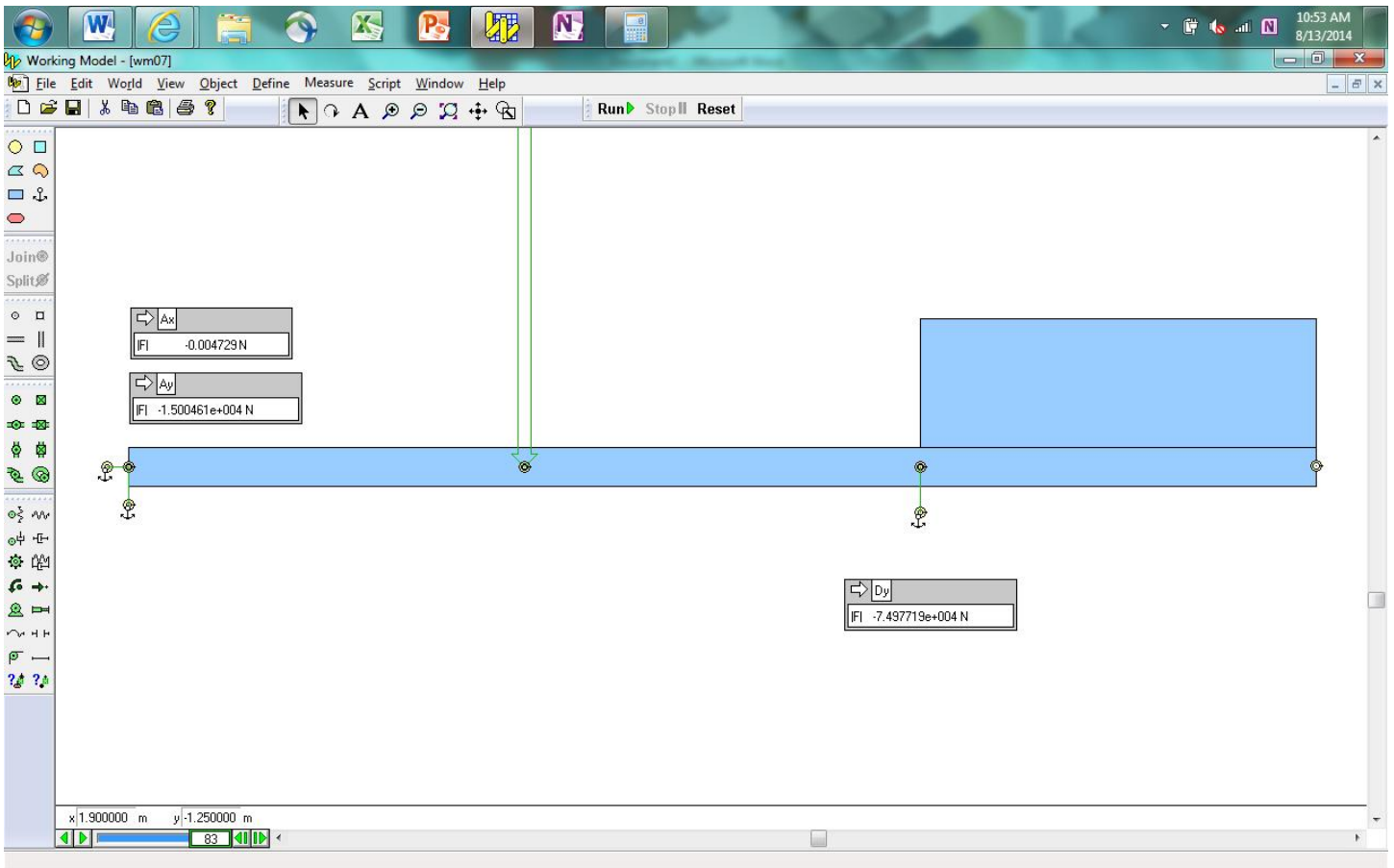
Run the simulation and watch the second rectangle drop onto the first rectangle. Stop the simulation.



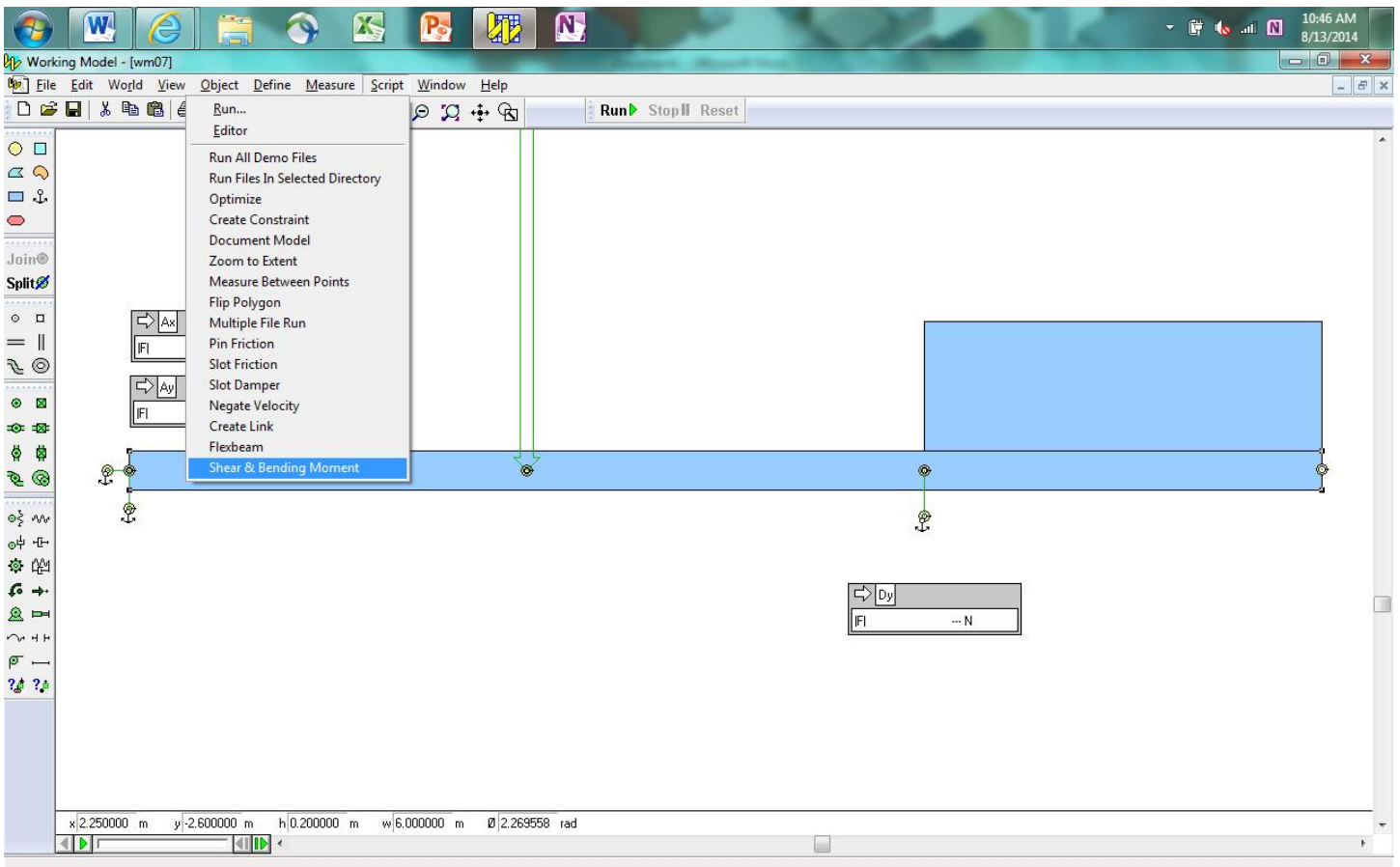
Now that the second rectangle is touching the first rectangle, go to World/Start Here to tell the simulation to start at this condition.

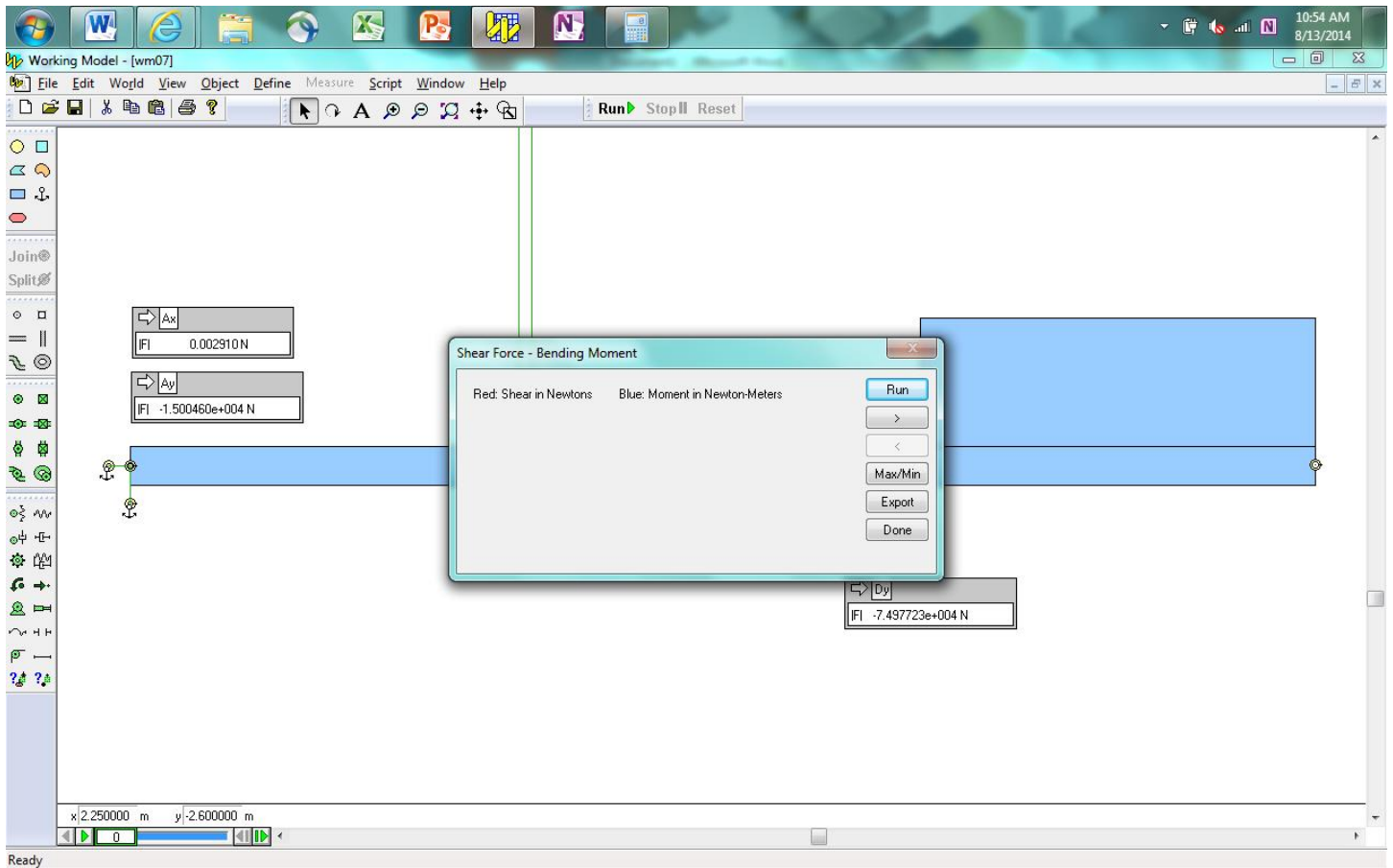


Double-click the second rectangle to change its mass to the appropriate value to simulate a distributed load. Run the simulation.

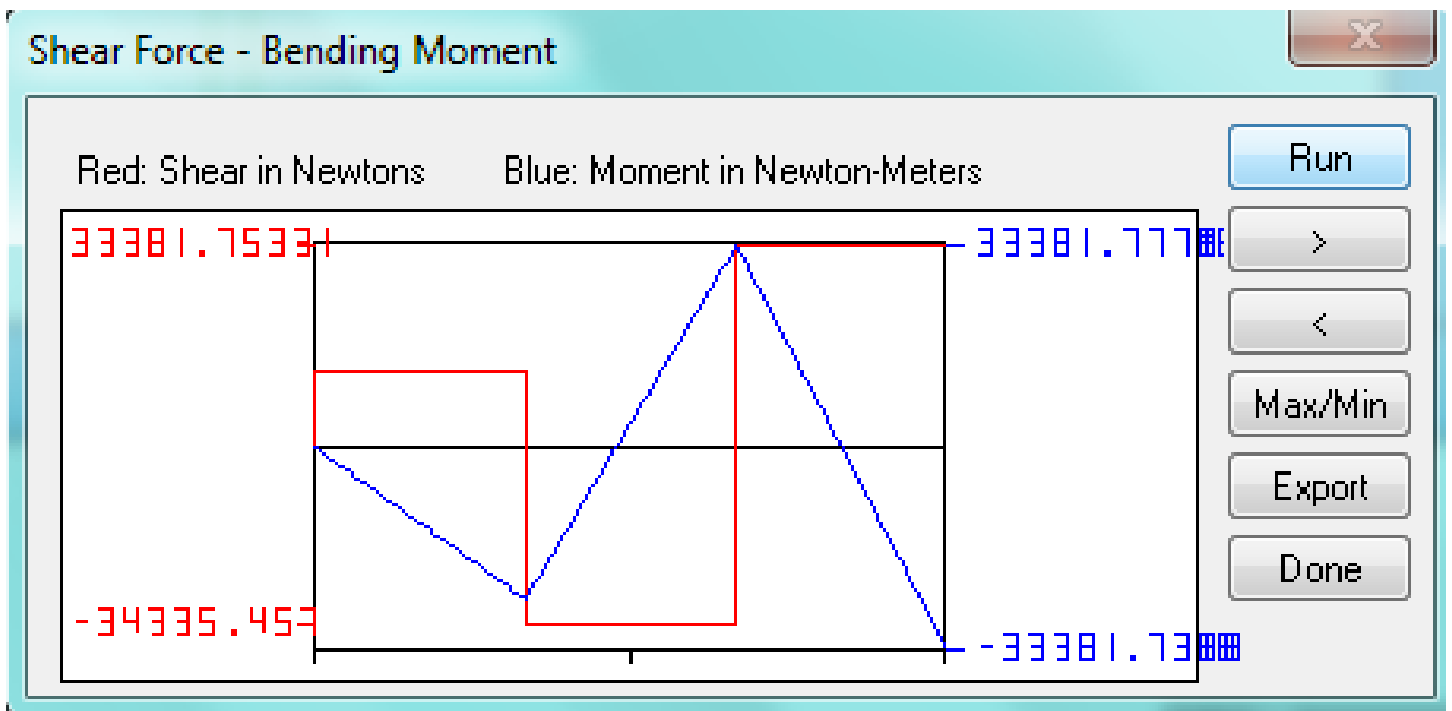


Select the beam. Go to the Script/Shear and Bending Moment pull-down menu.

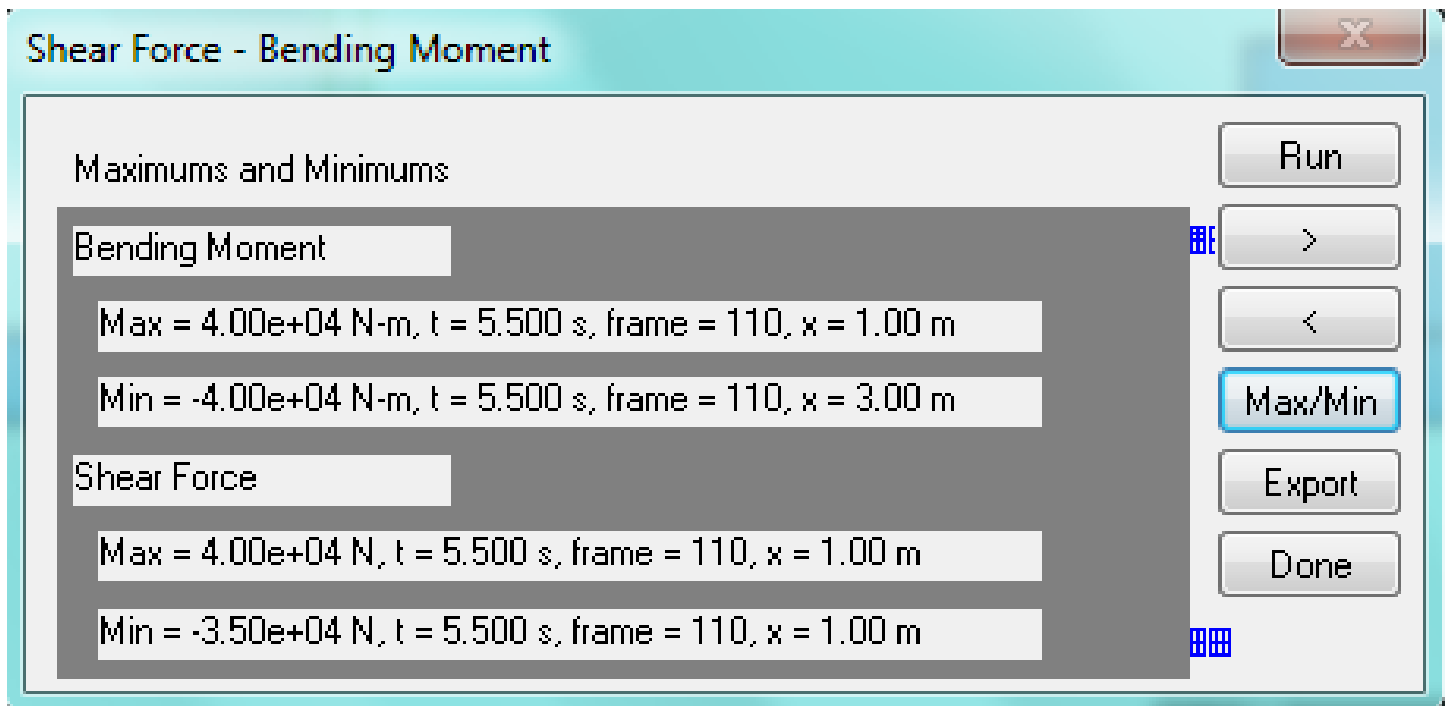




Press the Run button in the dialog box.



Press Max/Min.



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.