## Practice Problems – MecMovies (20 points)Make sure you do this assignment at a machine that can print your final page.

1. MM Module 8.1 is a centroid game. There are six rounds, and each round has several questions in it. Complete the six rounds in M8.1. At the end, type your name and print out the sheet as part of your assignment.



## Practice Problems – Short Calculations (4 points)Document the Given, Find, and your Solution.

1. You want to take a long rectangular piece of steel and turn it in to a circle. To do this you are planning to put two concentrated moments (one on each end, and in opposite directions) such that the whole beam is in pure bending. The beam is 1/32 in wide, 1/4 in tall, and 52.36 ft long. Calculate the following:
	1. magnitude of the concentrated moments [ lbf\*ft] that must be applied such that the two ends will touch one another
	2. Compressive stress [psi] at the top of the beam due to the bending moment.

**Notes:**
The modulus of elasticity for steel is 29 \* 106 psi
The moment of area for a rectangle is

$$I\_{z}=\frac{bh^{3}}{12}$$