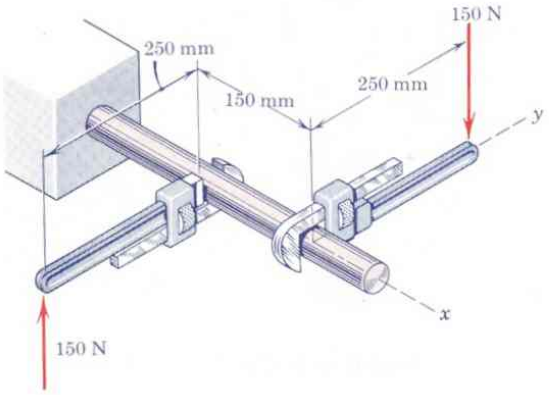
Statics ECE210 Exam 1
Pacheco

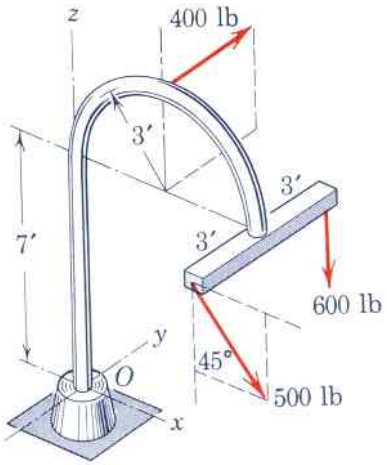
Name: _____ # Student ID: _____

Midterm exam No. 1: Open book, closed notes. It is **not** permitted to discuss the content of this exam with others. All your work must be shown; be neat and mark your answers. (10/3 points each problem).

1. The two forces acting on the handles of the pipe wrenches constitute a couple $\vec{M}$. Express the couple as a vector.



2. The combined action of the three forces on the base at O may be obtained by establishing their resultant through O. Determine the magnitudes of the resultant force $\vec{R}$ and the accompanying couple $\vec{M}$



3. The resultant of the two forces and couple may be represented by a wrench. Determine the vector expression for the moment $\vec{M}$ of the wrench and find the coordinates of the point P in the $x - z$ plane through which the resultant force of the wrench passes.