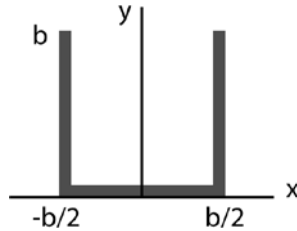


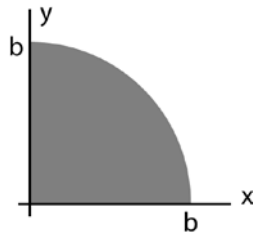
Classical Dynamics – Physics 312 – Homework 13

1. Taylor 9.29.

2. Find the center of mass of each of the following.



a. A thin wire bent into the form of a three-sided square shape shown above, with each segment having equal length b .



b. A quadrant of a uniform circular lamina of radius b , shown above.

c. The area bounded by parabola $y = x^2/b$ and the line $y = b$.

d. The volume bounded by the paraboloid of revolution $z = (x^2 + y^2)/b$ and the plane $z = b$.

e. A solid uniform right circular cone of height b and radius R , with apex at the origin.

3. Find the moments of inertia about their symmetry axes of each of the objects in Question 2. Each object has mass m .