MATH 2415 Test 4   Name: _____

1. Find the x-coordinate of the center of mass of the two-dimensional region

$$\{(x, y) \mid r \le 4 \text{ and } 0 \le \theta \le 2\pi/3\}.$$

(Assume uniform density.)

2. Given density $dm/dV = 4y$, find the mass of the tetrahedron

$$\{(x, y, z) \mid 0 \le z \le x \le y \le 3\}.$$