

Math 223

Week 7 Homework due Tuesday, October 12

Sections 12.3 12.4

Section 12.3, problems 9, 11, 13, 19, 23, 35, 27

Hints:

In all cases, draw the region in the xy plane first, then choose a and b so that $a \leq \theta \leq b$ in the region, then for a fixed value of θ decide lower and upper limits for r : $f(\theta) \leq r \leq g(\theta)$.

Section 12.4, problems 1, 7, 11, 15, 18, 21

Hints:

11. Use $\rho(x, y) = ky$.

18. Compute the two moments I_x and I_y and compare. The smaller the inertia, the easier it is to rotate the blade.