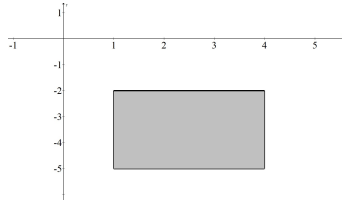
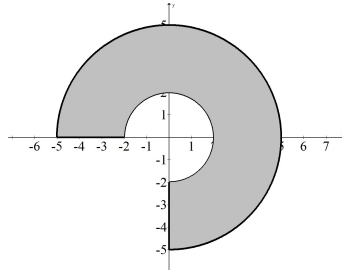


Worksheet 4 Solutions

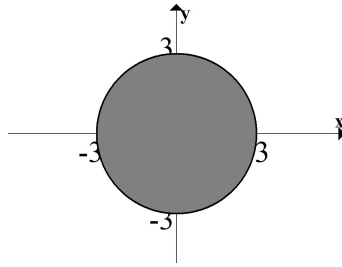
1. (a) The region $1 \leq x \leq 4$ and $-5 \leq y \leq -2$ in the xy -plane:



- (b) Sketch the region in the xy -plane given by all polar points (r, θ) such that $-\frac{\pi}{2} \leq \theta \leq \pi$ and $2 \leq r \leq 5$.

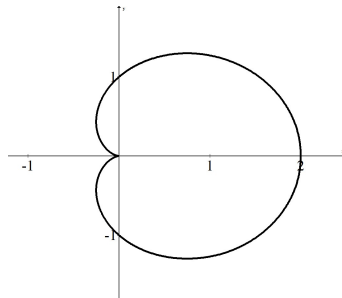


- (c) Sketch the region in the xy -plane given by all polar points (r, θ) such that $0 \leq \theta \leq 2\pi$ and $0 \leq r \leq 3$.



2. Let's plot a couple polar curves.

- (a) $r = 1 + \cos(\theta)$



- (b) $r = \theta$ (my answer only draws the graph for the range $\theta = 0$ to $\theta = 2\pi$, if we went beyond this the graph would continue to spiral outward).

