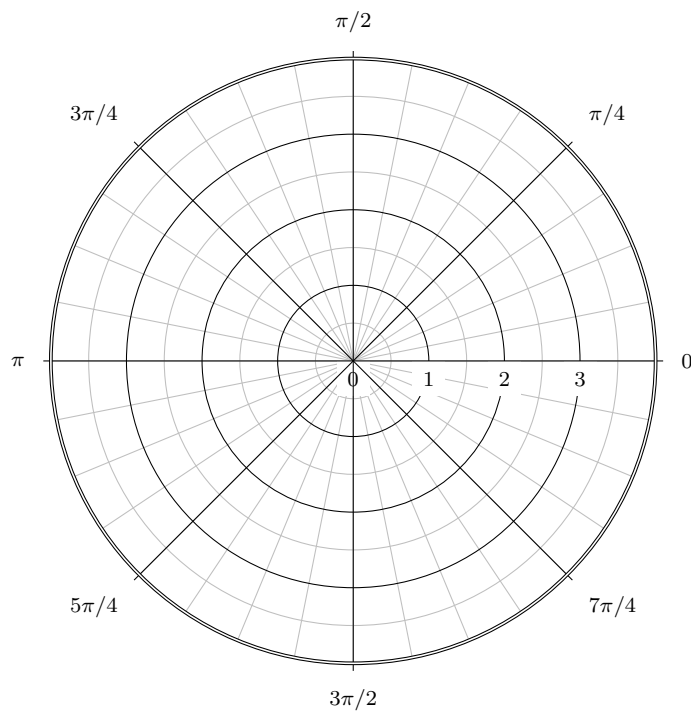
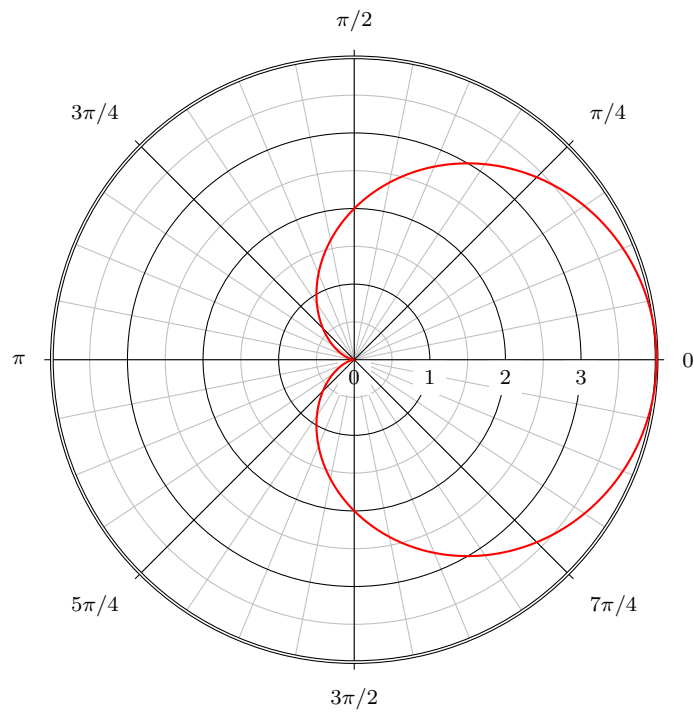


1. Convert the rectangular coordinates $(-4, 4)$ to polar coordinates
2. Convert the polar coordinates $(8, \frac{2\pi}{3})$ to rectangular coordinates
3. Draw a quick sketch of the three polar equations: $r = 4$, $\theta = \frac{\pi}{4}$, $r = 2 \sin(\theta)$



4. Find the area enclosed by the curve $r = 2 + 2 \cos(\theta)$



5. Find the points on the curve $r = 1 + \cos(\theta)$ where the tangent lines are horizontal.