Math 53 (Multivariable Calculus), Section 102 & 108
Week 2, Friday
Sep 2, 2022
For the other materials: seewoo5.github.io/teaching/2022Fall

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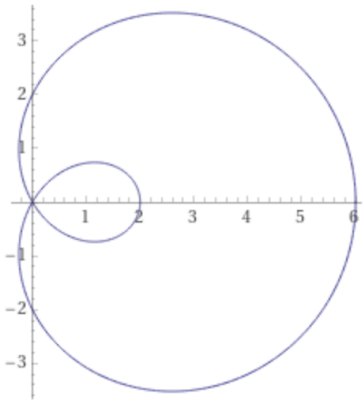
1. Find a polar equation for the following curves.
   (a) $x^2 - y^2 = 1$ (use $\cos 2\theta = \cos^2\theta - \sin^2\theta$)
   (b) $x^2 + (y - 1/2)^2 = 1/4$.
2. Assume that we have a following curve in polar equation $r = f(\theta)$.



   Sketch the curves with the following polar equations.
   (a) $r = \frac{1}{2} f(\theta)$
   (b) $r = f(\theta + \pi/2)$
   (c) $r = f(\pi - \theta)$