

Examples of curves in polar form

1. $r = a$, $r = a \cos \theta$, $r = a \sin \theta$, where $a \in \mathbb{R}$ (Circle)
2. $r = a(1 + \cos \theta)$, $r = a(1 - \cos \theta)$, where $a > 0$ (Cardioid)
3. $r^2 = a^2 \cos 2\theta$, $r^2 = a^2 \sin 2\theta$, where $a > 0$ (Lemniscate)
4. $r^2 = a \cos \theta$, where $a > 0$