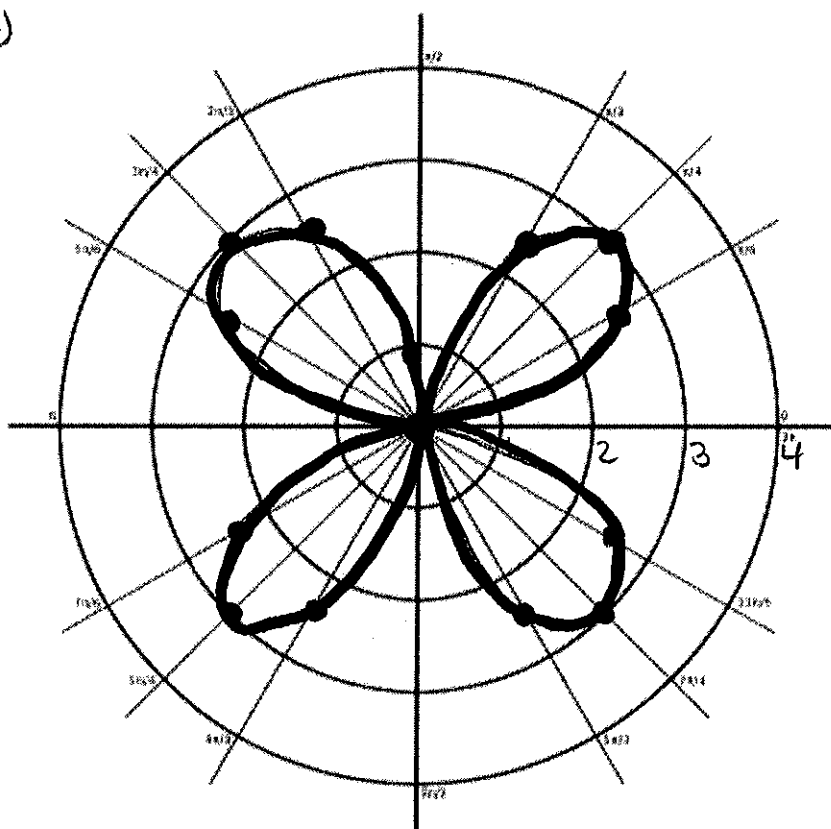


Graph $r = 3\sin(2\theta)$

(Rose Curve)

θ	r
0	0
$\frac{\pi}{6}$	$3\sin(\frac{\pi}{3}) = 3(\frac{\sqrt{3}}{2})$ 2.6
$\frac{\pi}{3}$	$3\sin(\frac{2\pi}{3}) = 3(\frac{\sqrt{3}}{2})$ 2.6
$\frac{\pi}{2}$	$3\sin(\pi) = 3(0)$ 0
$\frac{2\pi}{3}$	2.6
$\frac{5\pi}{6}$	2.6
π	0
$\frac{7\pi}{6}$	-2.6
$\frac{4\pi}{3}$	-2.6
$\frac{3\pi}{2}$	0
$\frac{5\pi}{3}$	2.6
$\frac{11\pi}{6}$	2.6
2π	0



I need a few more points!

$$\theta = \frac{\pi}{4} \quad r = 3(\sin 2(\frac{\pi}{4})) = 3\sin\frac{\pi}{2} = 3 \cdot 1 = 3$$

$$\theta = \frac{3\pi}{4} \quad r = -3$$

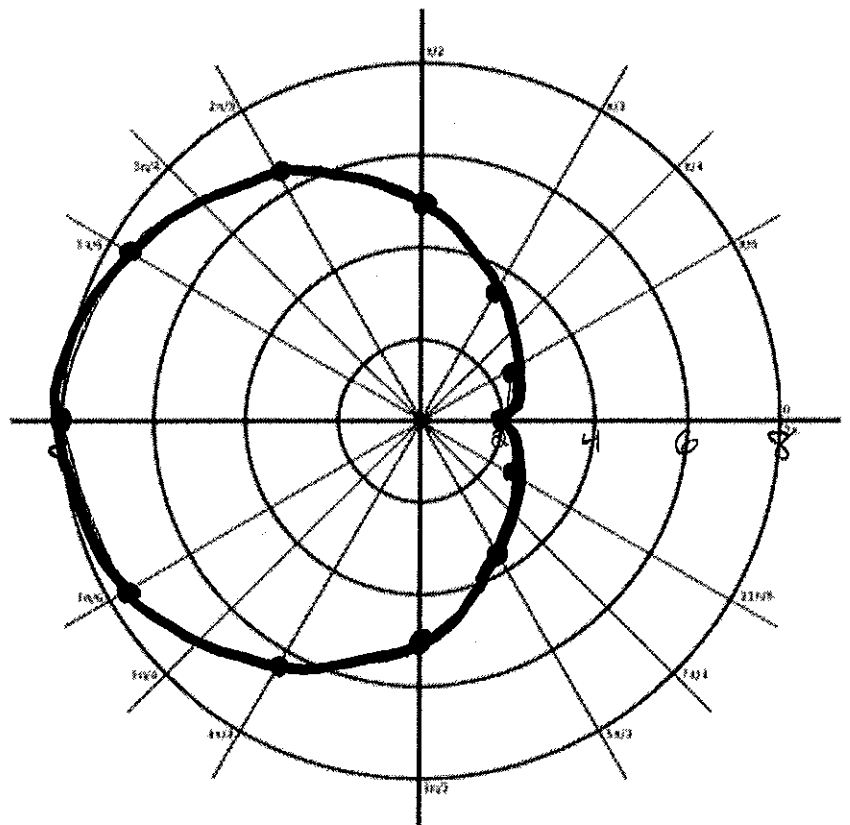
$$\theta = \frac{5\pi}{4} \quad r = 3$$

$$\theta = \frac{7\pi}{4} \quad r = -3$$

Graph $r = 5 - 3\cos\theta$

(Dimpled Limaçon)

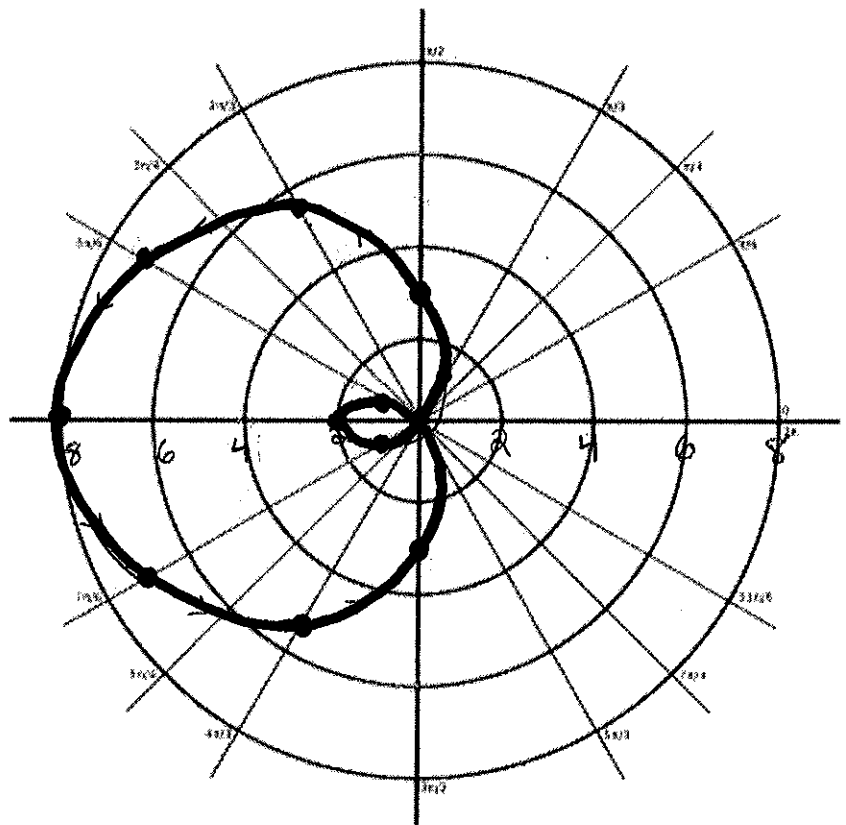
θ	r
0	$5 - 3(1)$ 2
$\frac{\pi}{6}$	$5 - 3(\frac{\sqrt{3}}{2})$ 2.4
$\frac{\pi}{3}$	3.5
$\frac{\pi}{2}$	5
$\frac{2\pi}{3}$	6.5
$\frac{5\pi}{6}$	7.5
π	$5 - 3(-1)$ 8
$\frac{7\pi}{6}$	7.5
$\frac{4\pi}{3}$	6.5
$\frac{3\pi}{2}$	5
$\frac{5\pi}{3}$	3.5
$\frac{11\pi}{6}$	2.4
2π	2



Graph $r = 3 - 5\cos\theta$

(Limaçon with an inner loop)

θ	r
0	-2
$\frac{\pi}{6}$	$3 - 5(\frac{\sqrt{3}}{2})$ -1.33
$\frac{\pi}{3}$	$3 - 5(\frac{1}{2})$.5
$\frac{\pi}{2}$	3
$\frac{2\pi}{3}$	5.5
$\frac{5\pi}{6}$	7.3
π	8
$\frac{7\pi}{6}$	7.3
$\frac{4\pi}{3}$	5.5
$\frac{3\pi}{2}$	3
$\frac{5\pi}{3}$.5
$\frac{11\pi}{6}$	-1.33
2π	-2



Graph $r = 2 + 2\sin\theta$

(Cardioid) (Limaçon with a cusp)

θ	r
0	$2+2(0)$ 2
$\frac{\pi}{6}$	$2+2(\frac{1}{2})$ 3
$\frac{\pi}{3}$	$2+2(\frac{\sqrt{3}}{2})$ 3.73
$\frac{\pi}{2}$	$2+2(1)$ 4
$\frac{2\pi}{3}$	3.73
$\frac{5\pi}{6}$	3
π	2
$\frac{7\pi}{6}$	1
$\frac{4\pi}{3}$.27
$\frac{3\pi}{2}$	0
$\frac{5\pi}{3}$.27
$\frac{11\pi}{6}$	1
2π	2

