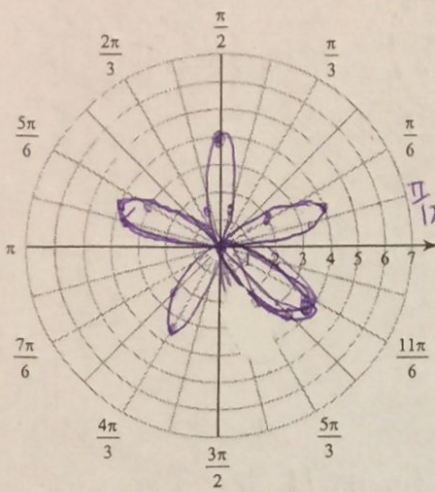


Graphing Polar Practice

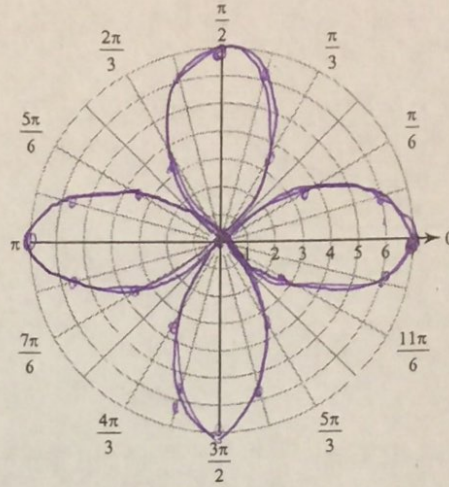
Consider each polar equation. Classify the curve; and sketch the graph.

1) $r = 4\sin(5\theta)$ *Rose*



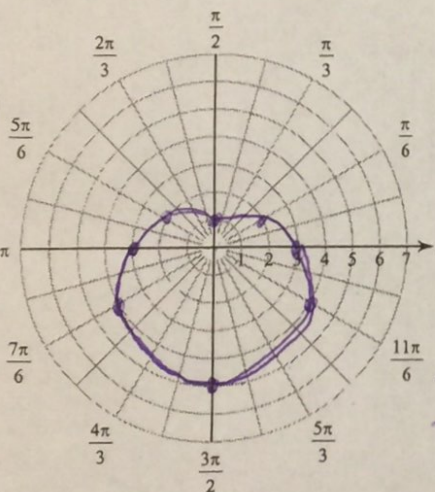
θ	r
0	0
$\frac{\pi}{6}$	2
$\frac{\pi}{10}$	4
$\frac{\pi}{3}$	3.5
$\frac{\pi}{2}$	0
$\frac{3\pi}{10}$	4

2) $r = 7\cos(2\theta)$ *Rose*



θ	r
0	7
$\frac{\pi}{6}$	3.5
$\frac{\pi}{4}$	0
$\frac{\pi}{3}$	-3.5
$\frac{\pi}{2}$	-7
$\frac{2\pi}{3}$	-3.5
$\frac{5\pi}{6}$	3.5
π	7

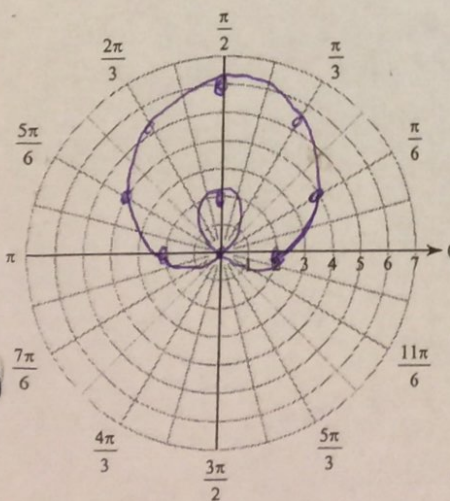
3) $r = 3 - 2\sin\theta$



θ	r
0	3
$\frac{\pi}{6}$	3
$\frac{\pi}{2}$	1
$\frac{2\pi}{3}$	2
$\frac{5\pi}{6}$	4
π	5

Limaçon no loop

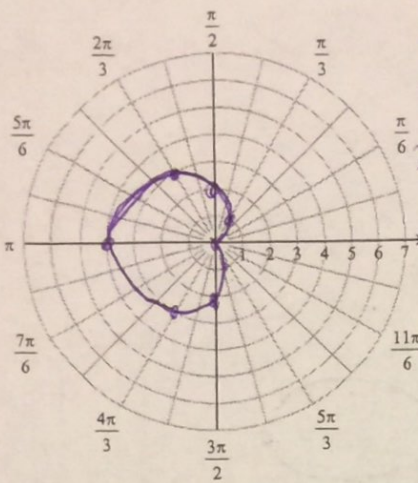
4) $r = 2 + 4\sin\theta$



θ	r
0	2
$\frac{\pi}{6}$	4
$\frac{\pi}{2}$	6
$\frac{2\pi}{3}$	4
$\frac{5\pi}{6}$	5.5
π	2
$\frac{7\pi}{6}$	0

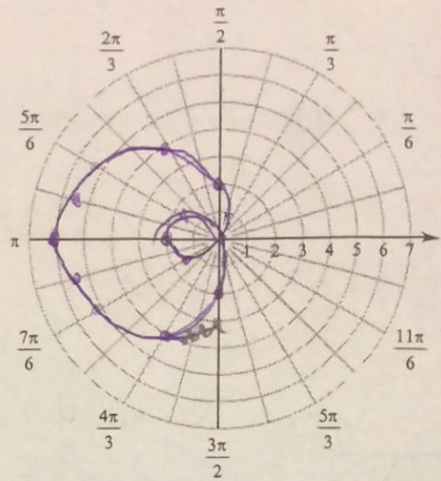
Limaçon w/ loop

5) *Cardioid*
 $r = 2 - 2\cos\theta$



X	Y
0	0
$\pi/3$	1
$\pi/2$	2
$2\pi/3$	3
π	4

6) $r = 2 - 4\cos\theta$

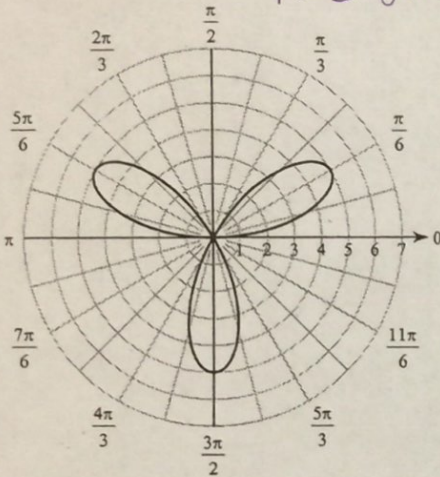


X	Y
0	-2
$\pi/6$	-1.5
$\pi/2$	2
$2\pi/3$	4
π	6
$3\pi/2$	2

Consider each polar graph. Classify the curve; and write the equation.

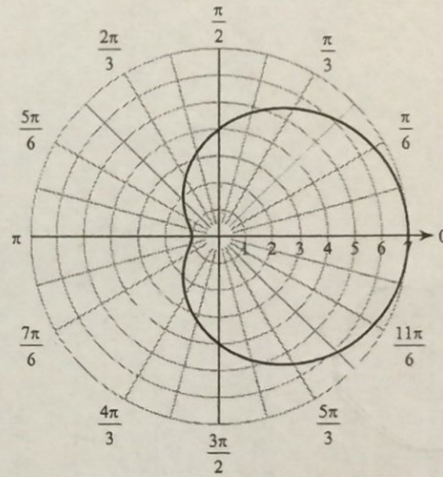
7)

$r = 5\sin(3\theta)$



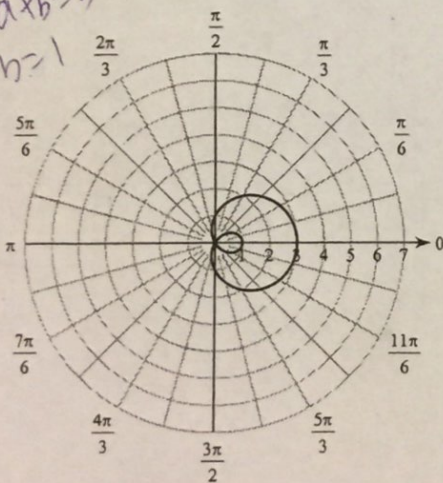
8)

$a > b$
 $a + b = 7$
 $a - b = 1$
 $r = 4 + 3\cos\theta$



$a < b$
 $a + b = 3$
 $a - b = 1$

$r = 1 + 2\cos\theta$



10)

$r = 2 - 2\cos\theta$

$a = b$
 $a + b = 4$

