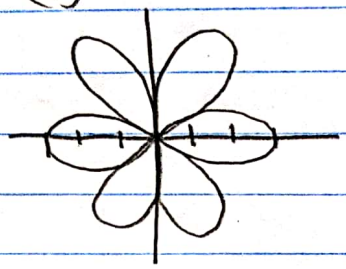
HW Day 2: p. 9-10 # 7, 9-12, 33, 34, 35, 38, 41, 45, 49, 51

7. $r_1 = 3\cos 6\theta$ → rose w/ 12 petals

$r_2 = 3\sin 8\theta$ → rose w/ 16 petals.

$r_3 = 3|\cos 3\theta|$ ← because of abs value rose w/ 6 petals

Graph (b)



#9-12

Graphs (a) $r = 2 - 2\sin\theta$

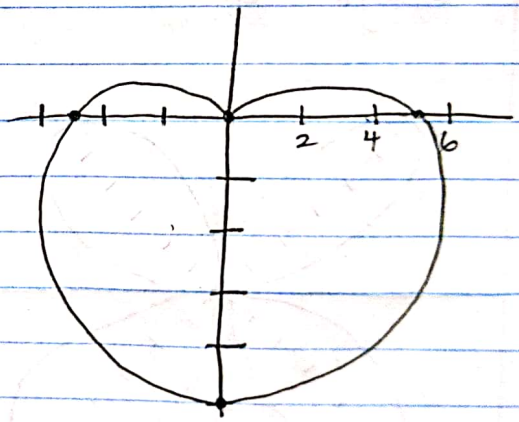
(b) $r = 2 - 2\cos\theta$

(c) $r = 2 + 3\cos\theta$

(d) $r = 2 - \frac{3}{2}\sin\theta$

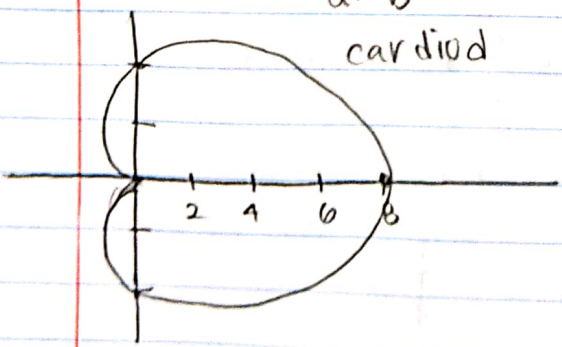
(34) $r = 5 - 5\sin\theta$

a = b cardiod



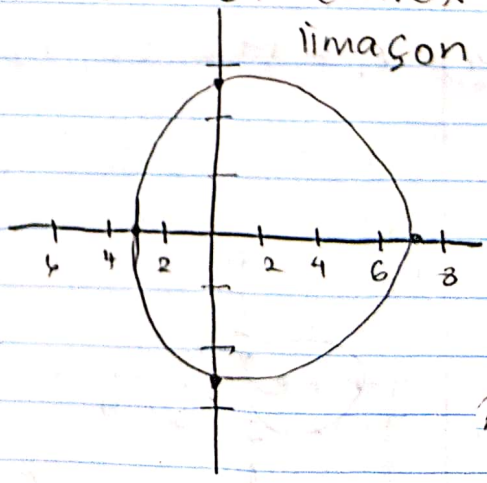
33. $r = 4 + 4\cos\theta$

a = b cardiod



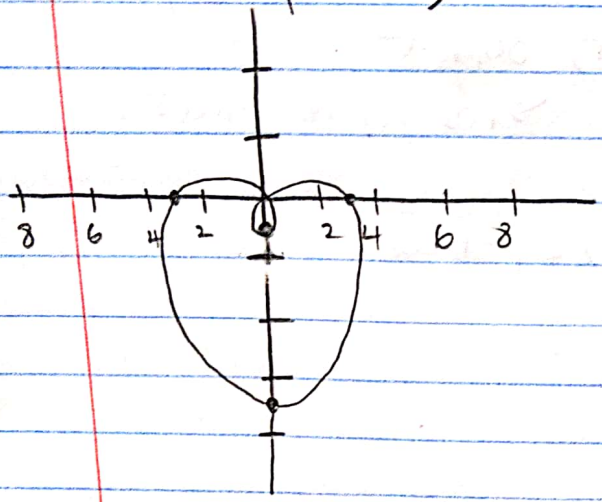
(35) $r = 5 + 2\cos\theta$

$a \geq 2b$ convex limaçon



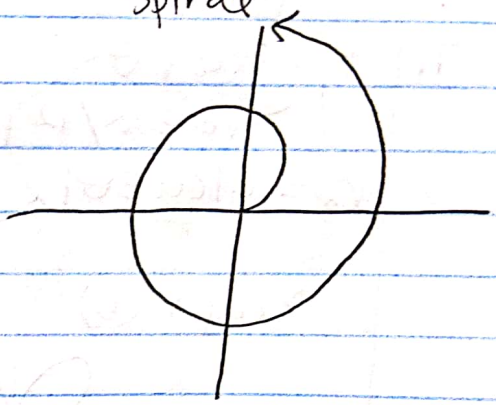
(38) $r = 3 - 4\sin\theta$

inner loop limaçon



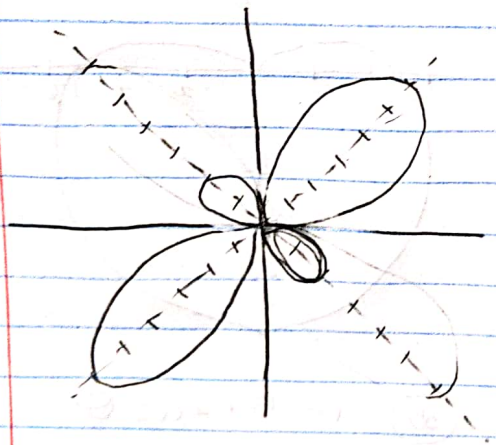
(41) $r = 2\theta$

spiral



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

length = 6



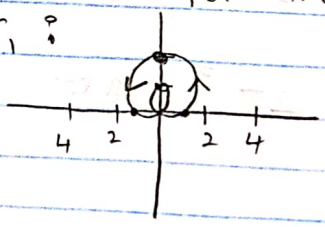
(49) $r_1 = 1 + 3\sin\theta$,

$r_2 = -1 + 3\sin\theta$

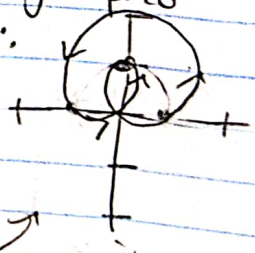
$r_3 = 1 - 3\sin\theta$

r_1 and r_2 have identical graphs

r_1 :



r_2 :

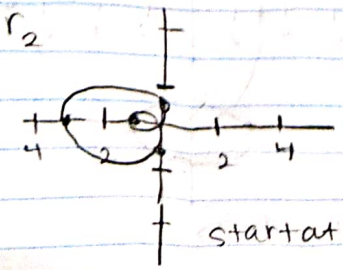


inner loop does 1st

(51) $r_1 = 1 + 2\cos\theta$, $r_2 = 1 - 2\cos\theta$, $r_3 = -1 - 2\cos\theta$

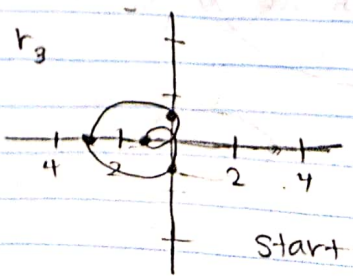
r_2 and r_3 have identical graphs

r_2



start at $(-1, 0)$

r_3



start at $(-3, 0)$