

**Homework 1 for M312, Section 30353**  
**due Wednesday, September 4, 2013**

1. Exercise 4.1.12 (p. 227)
2. Exercise 4.1.13 (p. 227)
3. Exercise 4.1.15 (p. 227)
4. Exercise 4.1.24 (p. 227)
5. Exercise 4.2.3 (p. 234)
6. Exercise 4.2.5 (p. 234)
7. Exercise 4.2.7 (p. 234)
8. Exercise 4.2.8 (p. 234)
9. Compute the length of the hypocycloid  $\mathbf{c}(t) = (\sin^3 t, \cos^3 t)$ ,  $0 \leq t \leq 2\pi$ .
10. Exercise 4.2.16 (p.235)