

The homeworks will be graded statistically.

All the problems are from the textbook: *Nonlinear Dynamics and Chaos*, by Steven H. Strogatz, Perseus Books Group, 2001.

1. Problem 2.1 (2.1.1-2.1.4). For 2.1.4, use the trig identity

$$\tan\left(\frac{x}{2}\right) = \frac{\sin x}{1 + \cos x}.$$

2. Problems 2.2.1, 2.2.3, 2.2.4, 2.2.7.
3. Problem 2.2.9.
4. Problem 2.2.10.
5. Problem 2.2.13, parts a,b,c.
6. Problem 2.3.1, part b.
7. Problem 2.3.2.
8. Problem 2.3.4.