

Homework assignments are due at the beginning of class. That way we can discuss questions during class.

1. 16/2b,d. **Hint.** Note the comment on the definition of stability at the end of §4 of the Dimension 1 handout.
- 2-4. Exercises 2.1, 6.1, and 6.3 of the Dynamics in Dimension 1 handout.
5. 16/4. **Hint.** a can be positive or negative.
6. Exercise 5.2 of the Dynamics in Dimension 1.5 handout.
7. Exercise 5.3 of the Dynamics in Dimension 1.5 handout. *It is sufficient to treat only the first and third of the four patterns.*

Discussion. 1. The problems are all nonlinear.

2. In none of them are you asked to find exact solutions.

3. The large time asymptotics is easily determined nevertheless. The one dimensional case is much simpler than higher dimensions.