1. Do Exercise 1.4. Also find the best absolute value ($L_1$ norm) straight line and the best infinity norm ($L_\infty$ norm) straight line.

2. Do Exercise 1.10.

3. Do Exercise 1.32.

4. Do Exercise 1.37.

5. Do Experiment 1 (p. 118). Do not choose $y = -2 * x + 15$. For your choice, what polynomial best approximates the data? What polynomial best approximates the target function? Provide copies of two figures illustrating your answer.