EconS 503 - Microeconomic Theory II
Homework #2 - Due date: Friday, February 11th.

1. **Exercises from Tadelis:**

   (a) Chapter 6: Exercises 7, 9, and 11.

   (b) Chapter 8: Exercises 7 and 9.

2. **Entry that reduces aggregate output.** Consider an industry with $N \geq 2$ firms competing a la Cournot, facing inverse demand function $p(Q) = a - bQ$, and symmetric cost function $c(q_i) = cq_i + \frac{d}{2}q_i^2$, where $a > c$, $d < 0$, $d + 2b > 0$, and $d + b < 0$. (You may also assume that $\frac{a-c}{2b+d} < -\frac{c}{d}$ to avoid settings with negative costs.)

   (a) Find equilibrium output for every firm i, q_i^*.

   (b) Find the aggregate output in equilibrium, Q^*.

   (c) Show that Q^* decreases with entry. Interpret.