1. Binger and Hoffman, chapter 12, question for discussion #3, page 328.

2. Consider the following production function

\[ x = \frac{20KL}{K + L}. \]

Suppose that input prices are given by \( w = 1 \) and \( r = 4 \). Also suppose capital is fixed at 10 units, \( K = 10 \). Find the firm’s short run supply function.

3. (a) Suppose that the city of Columbus were to impose a tax on the economic profits received by firms operating inside city limits. For firms operating in nationwide perfectly competitive markets, how will the tax affect their output decisions in the short run and the long run?

(b) Now suppose that the tax was on accounting profits, so that firms were taxed on the returns to the capital they owned. For firms operating in nationwide perfectly competitive markets, how will the tax affect their output decisions in the short run and the long run?

4. Consider the following market demand function and (short-run) market supply function

\[ X^d = 3200 - 100p_x \]
\[ X^s = 200p_x - 100. \]

(a) Find the short-run equilibrium price and quantity.

For parts (b)-(d), suppose that a tax of $1 per unit is imposed, to be paid by the firms. [That is, the new equilibrium price is the price paid by consumers. The net price received by firms is the new equilibrium price minus the $1 tax.]

(b) What will be the new short-run equilibrium price and quantity, after the tax is imposed.

(c) Explain how the burden of the tax is shared by consumers and firms in the short run.

(d) Assume that the market was in long-run equilibrium (as well as short-
run equilibrium) before the tax was imposed. What will be the new long-run equilibrium price and quantity, as a result of the tax?