2.5 — Short Run Profit Maximization — Practice Problems

ECON 306 — Spring 2022

A firm has short-run costs given by:

$$C(q) = q^2 + 1$$
$$MC(q) = 2q$$

1. Write an equation for fixed costs, f.

2. Write an equation for variable costs, $VC(q)$.

3. Write an equation for average fixed costs, $AFC(q)$.

4. Write an equation for average variable costs, $AVC(q)$.

5. Write an equation for average (total) costs, $AC(q)$.

6. Suppose the firm is in a competitive market, and the current market price is \$4, how many units of output maximize profits?

7. How much profit will this firm earn?

8. Below what market price would the firm shut down in the short run if it were earning losses?

9. At what market price would the firm break even ($\pi = 0$)?

10. Write out the equation for the firm's short run supply curve.