

# Cournot/Monopoly Problem

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Suppose the inverse demand function is:

$$p = 50 - 2q$$

The cost function for a firm is:

$$c = 10 + 2q$$

- A) Calculate the quantity chosen by a monopolist and the resulting market price.
- B) What are the producer, consumer, and total surplus under a monopoly. What is the dead-weight loss in comparison to marginal cost pricing?
- C) Calculate the quantity chosen by each firm in an  $n$  - *firm* cournot market. What is the resulting market quantity and price as a function of  $n$ .
- D) What are the producer, consumer, and total surplus as a function of  $n$ . What is the dead-weight loss in comparison to marginal cost pricing as a function of  $n$ ?