

# Supply & Demand Together Problem Set

## Principles of Microeconomics

July 14, 2025

### Instructions

Please answer on a separate sheet of paper and submit on Gradescope.

### Multiple Choice

Please briefly explain your choice with a sentence or a diagram.

1. The discovery of a large new reserve of crude oil will shift the \_\_\_\_\_ curve for gasoline, leading to a \_\_\_\_\_ equilibrium price.
  - (a) supply; higher
  - (b) supply; lower
  - (c) demand; higher
  - (d) demand; lower
2. If the economy goes into a recession and incomes fall, what happens in the markets for inferior goods?
  - (a) Prices and quantities both rise.
  - (b) Prices and quantities both fall.
  - (c) Prices rise and quantities fall.
  - (d) Prices fall and quantities rise.
3. Which of the following might lead to an increase in the equilibrium price of jelly and a decrease in the equilibrium quantity of jelly sold?
  - (a) an increase in the price of peanut butter, a complement to jelly
  - (b) an increase in the price of Marshmallow Fluff, a substitute for jelly
  - (c) an increase in the price of grapes, an input into jelly
  - (d) an increase in consumers' incomes as long as jelly is a normal good

## Free Response

4. Soda and pizza are complements because they are often enjoyed together. When the price of soda rises, what happens to the supply, demand, quantity supplied, quantity demanded, and price in the market for pizza? Please draw a supply-and-demand diagram and summarize it in a sentence.
5. Please explain each of the following statements using a supply-and-demand diagram and a summarizing sentence.
  - (a) "When a cold snap hits Florida, the price of orange juice rises in supermarkets throughout the country."
  - (b) "When the weather turns warm in New England every summer, the price of hotel rooms in Caribbean resorts plummets."
  - (c) "When a war breaks out in the Middle East, the price of gasoline rises, and the price of a used Cadillac falls."
6. Consider the market for minivans. For each of the events listed here, please draw a diagram to show the effect on the price and quantity of minivans.
  - (a) People decide to have more children.
  - (b) A strike by steelworkers raises steel prices.
  - (c) Engineers develop new automated machinery for the production of minivans.
  - (d) The price of sports utility vehicles rises.
  - (e) A stock market crash lowers people's income.
7. Consider the markets for film streaming services, TV screens, and tickets at movie theaters.
  - (a) Suppose a technological advance reduces the cost of manufacturing TV screens. Please draw a diagram to show what happens in the market for TV screens, and summarize your diagram in a sentence.
  - (b) Please draw two more diagrams to show how the change in the market for TV screens affects the markets for film streaming and movie tickets. Summarize your diagrams with one sentence each.
8. Assume that demand for Starbucks coffee is given by  $Q_D = 30 - 2P$ , and supply is given by  $Q_S = 4P$ .
  - (a) What is the equilibrium price of Starbucks coffee?
  - (b) What is the equilibrium quantity of Starbucks coffee?
9. How long did this problem set take you?