

Econ 101 | Vignette C4

Modeling a Pandemic

In this Vignette we're going to model a hypothetical scenario to illustrate the effect a global pandemic can have on the lives of buyers and sellers and the impact of one type of government policy. This is both hypothetical and illustrative.

Imagine a pandemic forces the world into a global lockdown and a subsequent slow reopening. This has many effects on the market for food. First, buyers have roughly the same income, due in part to unemployment benefits, government support, and employee protections. Second, there are major supply chain disruptions for nearly every good available. Third, many types of goods and services are no longer available, like movie theaters, cruises, and in-restaurant dining.

Imagine the market for food (as a bundle) is represented by the following supply and demand curves before the pandemic.

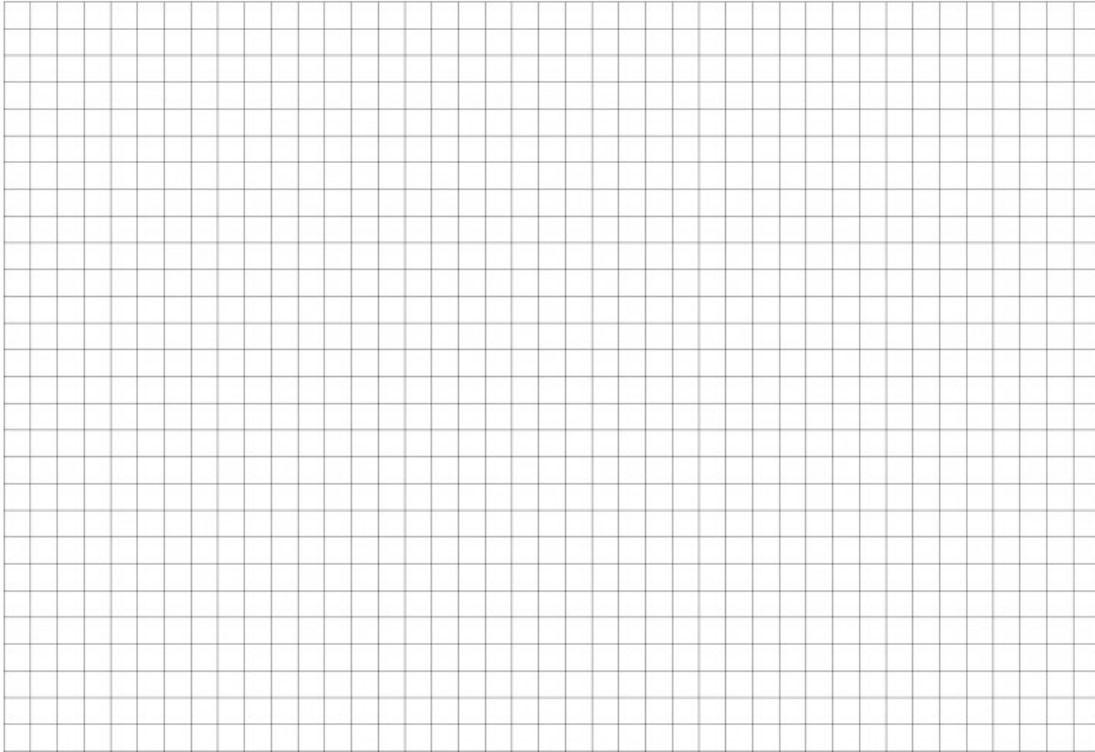
$$S : P_s = 7 + Q_s$$

$$D : P_d = 108 - 100Q_d$$

Units are in dollars and daily servings per person.

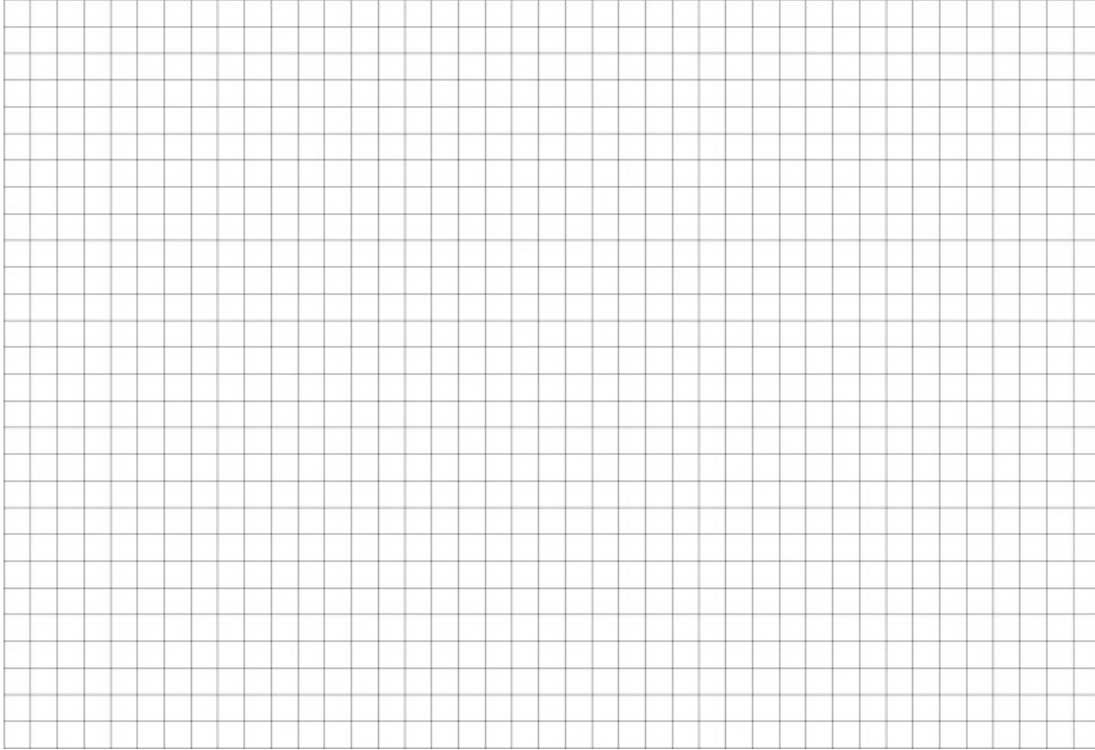
Q1 | Initial Equilibrium

Use a graph to discuss the food market prior to the pandemic. What was the impact of the pandemic in this market?



Q2 | Supply Chain Shock

Imagine the unavailability of other uses of money increased the demand curve for food by \$1 and the disruption in the supply chain shifted the supply curve up by \$1. Find the new equilibrium price and quantity. What phenomenon is this?



Q3 | A Ban on Price Gouging

In response to worries about price-gouging a basic necessity during a time to difficulty, the government imposes a ban on price hikes from pre-pandemic levels. Use a graph to discuss the impact on food availability were this policy to be implemented.

