

ECO 120: Global Macroeconomics
Week 2 Homework: Supply and Demand

Name: _____

Directions: Notice that all problems ask you for a descriptive answer in addition to performing a calculation or manipulating a graphical model. For full credit, make sure that you do both. You may print these sheets and put your answers in the space provided or you may use your own paper to write your answers.

When you have finished, scan or take pictures of your work, combine all images to a single PDF file, and upload your work as a single PDF file to the Canvas Assignment area. There are apps available for Apple and Android mobile devices that can create PDF documents using your device's camera, including the Apple iPhone's native *Notes* app (use the *scan document* feature) and *Adobe Scan* app available for Android and Apple mobile devices. There are also free online tools such as <https://online2pdf.com/> and <https://www.easypdfcloud.com/>.

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For each of the following problems, read the scenario and determine the following (in order):

- Does the scenario cause a shift in the demand and/or supply curve? If so, which curve, which direction?
 - Draw the supply and demand curves, labeling the axis and giving a title with the market.
 - Draw in the appropriate shift(s) in the supply and/or demand curves.
 - Label the original and new equilibrium price and quantities.
 - What is the impact of the scenario on price? What is the impact on quantity?
1. Gasoline prices fell globally and in the United States in 2015-2016. Describe and illustrate the impact on the market compact cars, which on average consume less gasoline than other vehicles, such as trucks and SUVs.

2. Bird flu is a disease that affects birds, including poultry, which is often deadly for the birds and is highly contagious. In 2022, 47 out of 50 U.S. states reported poultry outbreaks and more than 58 million birds in the United States have died or were destroyed to prevent further outbreaks. Describe and illustrate the impact on eggs.

3. During the COVID-19 pandemic, people and businesses had a greater desire and need to work remotely, using computer technology to collaborate and communicate with each other. At the same time, production disruptions caused by the pandemic has led to lower production of computer microchips. Describe and illustrate the impact on the market for computer microchips.

4. Mortgage interest rates have increased from 3.5% to almost 7% from 2022 to 2023 in the United States, making it more expensive for people to borrow money to buy homes. Describe and illustrate the impact on the market for residential housing.

5. Walmart sells a number of inferior goods, such as inexpensive off-brand clothing, off-brand food, etc. Suppose the U.S. economy enters a recession, leading to higher unemployment and decreases in household income. Describe and illustrate the impact on the market for inferior goods at Walmart.

6. The United States federal government gives a \$0.45 tax subsidy to gasoline producers for every gallon of ethanol blended into gasoline (a subsidy is a payment made by the government to an individual or firm, usually for performing some kind of action, like production of a particular product). Describe and illustrate the impact of the subsidy on the market for gasoline blended with ethanol.

7. Suppose there is a technological innovation making it easier and less costly to produce recycled paper. Suppose at the same time, people become more environmentally conscious and become more interested in buying recycled paper. Describe and illustrate the impact on the equilibrium price and quantity of recycled paper.