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Department of Economics
Economics 201
Spring 2026

Homework #2 (due by 9:00pm on Friday, January 30)

Please submit your answers to this homework through the Assignment link at Blackboard. ***No credit will be given for answers submitted in class or emailed to the professor****, regardless of the excuse.* This includes unique excuses like my dog ate my homework, but also more traditional excuses like "I lost my Internet". Please note that all submissions are final, again – regardless of the excuse (which includes "I accidentally hit the submit button"). You will get whatever score is assigned to you by Blackboard. If you are unfamiliar with Blackboard, then it would be a good idea to visit the class page at Blackboard and check out the homework assignments as they are posted.

Please note that when Blackboard grades answers to the fill-in-the-blank questions – your answer must match exactly with the answer that Blackboard is looking for or your answer will be considered incorrect. You'll always be given formatting instructions and you must follow those instructions. Below, you'll find some instructions on how to properly format your answers to these type of questions. A more complete discussion of these rules is provided at Blackboard. Reading that section is strongly recommended.

As stated above, given that answers to the fill-in-the-blank questions must not only be correct, but formatted properly, correct formatting is part of the process. A wrongly formatted answer is still a wrong answer. I.e., you will not have points added to your homework score if you got answers wrong due to formatting mistakes. However, this is still something you will want to bring to Professor Haworth's attention. *In addition, if you are unsure how to round an answer (e.g. whether 3.25 rounds to 3.2 or 3.3), then please contact Professor Haworth.*

Homework #2 formatting instructions:

(a) ***Question #22*** *(i.e. 22a-22b): round your answer to the nearest tenth. E.g., if you determine that the quantity increases by 3.46%, then you should record your answer as 3.5.*

(b) ***Question #24a:*** *express your answer as a whole number. If you do get a fractional answer, round that answer to the nearest whole unit. E.g., if your answer is 25.1, then record your answer as 25.*

(c) ***Question #24b:*** *express your answer in terms of dollars or as a whole number (i.e. with or without the dollar sign). E.g., if your answer is 100, then record your answer as $100 or 100, but not 100.0 or $100.00.*

Homework #2 Questions

Consider the Louisville area market for larger new appliances (e.g. refrigerators, washing machines, etc). Assume that this market consists of many demanders and suppliers within the city of Louisville. Assume as well that new appliances are considered a normal good.

Questions #1-7 below provide you with an event that affects the Louisville area market for larger new appliances. You must identify how each event affects this market. E.g., in Question 1, if you believe that technological change leads to an increase in both demand and supply, then you would select answer "f".

1. Metro Louisville government makes some regulatory changes that raise the cost of operating in the Louisville market.

a. Increase in Demand for new appliances
b. Decrease in Demand for new appliances
c. Increase in Supply of new appliances
d. Decrease in Supply of new appliances
e. Increase in the Demand for new appliances and Decrease in the Supply of new appliances
f. Increase in the Demand for new appliances and Increase in the Supply of new appliances
g. Decrease in the Demand for new appliances and Decrease in the Supply of new appliances
h. Decrease in the Demand for new appliances and Increase in the Supply of new appliances

2. Several new companies locate in Louisville, which leads to an increase in Louisville's population.

a. Increase in Demand for new appliances
b. Decrease in Demand for new appliances
c. Increase in Supply of new appliances
d. Decrease in Supply of new appliances
e. Increase in the Demand for new appliances and Decrease in the Supply of new appliances
f. Increase in the Demand for new appliances and Increase in the Supply of new appliances
g. Decrease in the Demand for new appliances and Decrease in the Supply of new appliances
h. Decrease in the Demand for new appliances and Increase in the Supply of new appliances

3. Certain changes in the Louisville market for larger new appliances in late 2025 lead consumers to expect lower future prices for new appliances about midway through 2026.

a. Increase in Demand for new appliances
b. Decrease in Demand for new appliances
c. Increase in Supply of new appliances
d. Decrease in Supply of new appliances
e. Increase in the Demand for new appliances and Decrease in the Supply of new appliances
f. Increase in the Demand for new appliances and Increase in the Supply of new appliances
g. Decrease in the Demand for new appliances and Decrease in the Supply of new appliances
h. Decrease in the Demand for new appliances and Increase in the Supply of new appliances

4. Kentucky State government increases their tax on the suppliers of new appliances in Louisville.
a. Increase in Demand for new appliances
b. Decrease in Demand for new appliances
c. Increase in Supply of new appliances
d. Decrease in Supply of new appliances
e. Increase in the Demand for new appliances and Decrease in the Supply of new appliances
f. Increase in the Demand for new appliances and Increase in the Supply of new appliances
g. Decrease in the Demand for new appliances and Decrease in the Supply of new appliances
h. Decrease in the Demand for new appliances and Increase in the Supply of new appliances

5. Indiana State government increases their tax on the suppliers of new appliances in Indiana.
a. Increase in Demand for new appliances
b. Decrease in Demand for new appliances
c. Increase in Supply of new appliances
d. Decrease in Supply of new appliances
e. Increase in the Demand for new appliances and Decrease in the Supply of new appliances
f. Increase in the Demand for new appliances and Increase in the Supply of new appliances
g. Decrease in the Demand for new appliances and Decrease in the Supply of new appliances
h. Decrease in the Demand for new appliances and Increase in the Supply of new appliances

6. There is a significant decrease in the distribution cost associated with manufacturers delivering new appliances to the new appliance suppliers in this market.
a. Increase in Demand for new appliances
b. Decrease in Demand for new appliances
c. Increase in Supply of new appliances
d. Decrease in Supply of new appliances
e. Increase in the Demand for new appliances and Decrease in the Supply of new appliances
f. Increase in the Demand for new appliances and Increase in the Supply of new appliances
g. Decrease in the Demand for new appliances and Decrease in the Supply of new appliances
h. Decrease in the Demand for new appliances and Increase in the Supply of new appliances

7. Technological change with the inventory systems of all larger new appliance suppliers in Louisville leads to improved productivity in this market.
a. Increase in Demand for new appliances
b. Decrease in Demand for new appliances
c. Increase in Supply of new appliances
d. Decrease in Supply of new appliances
e. Increase in the Demand for new appliances and Decrease in the Supply of new appliances
f. Increase in the Demand for new appliances and Increase in the Supply of new appliances
g. Decrease in the Demand for new appliances and Decrease in the Supply of new appliances
h. Decrease in the Demand for new appliances and Increase in the Supply of new appliances

Questions #8-13 relate to the Louisville area market for used automobiles (i.e. the buying and selling of used cars). Assume that used cars are a normal good and note that new automobiles are sold in a different, obviously related market.

In this question, you must use the demand and supply model to identify how different events affect the equilibrium price and equilibrium quantity within the Louisville used car market. The process works like this. First, you must determine which shift(s) are caused by the event listed below. Once you've determined the shift(s) that will occur, you must then determine how that shift affects the equilibrium price and quantity within this market. *Note that, although not required, it may help in this question to draw a graph.*

E.g., if you believe that the first event, higher income for Louisville residents leads to a decrease in supply, and that this shift causes an increase in the equilibrium price and decrease in the equilibrium quantity of used cars sold in the Louisville market, then you would select answer "c" in the responses below that question.

8. There is a significant increase in the income of Louisville residents.
a. Increase in both the equilibrium price and equilibrium quantity
b. Decrease in both the equilibrium price and equilibrium quantity
c. Increase in the equilibrium price, and decrease in the equilibrium quantity
d. Decrease in the equilibrium price, and increase in the equilibrium quantity

9. There is an increase in productivity associated with selling cars in the Louisville used car market.
a. Increase in both the equilibrium price and equilibrium quantity
b. Decrease in both the equilibrium price and equilibrium quantity
c. Increase in the equilibrium price, and decrease in the equilibrium quantity
d. Decrease in the equilibrium price, and increase in the equilibrium quantity

10. There is an increase in the wages paid by many of the used car suppliers in Louisville (e.g. dealerships that sell used cars).
a. Increase in both the equilibrium price and equilibrium quantity
b. Decrease in both the equilibrium price and equilibrium quantity
c. Increase in the equilibrium price, and decrease in the equilibrium quantity
d. Decrease in the equilibrium price, and increase in the equilibrium quantity

11. Kentucky lowers the legal driving age for an Intermediate license from 16 to 14 years old.
a. Increase in both the equilibrium price and equilibrium quantity
b. Decrease in both the equilibrium price and equilibrium quantity
c. Increase in the equilibrium price, and decrease in the equilibrium quantity
d. Decrease in the equilibrium price, and increase in the equilibrium quantity

12. The price of automobile insurance doubles for all drivers under the age of 20 years old, leading to the families of many teenagers to wait before letting their children get a license.
a. Increase in both the equilibrium price and equilibrium quantity
b. Decrease in both the equilibrium price and equilibrium quantity
c. Increase in the equilibrium price, and decrease in the equilibrium quantity
d. Decrease in the equilibrium price, and increase in the equilibrium quantity

13. Regulatory changes make it more difficult for private parties to sell their used cars in Louisville, and so many of them choose not to sell their used cars in this market.
a. Increase in both the equilibrium price and equilibrium quantity
b. Decrease in both the equilibrium price and equilibrium quantity
c. Increase in the equilibrium price, and decrease in the equilibrium quantity
d. Decrease in the equilibrium price, and increase in the equilibrium quantity

In Questions #14-16 below, you'll be provided with a change in the equilibrium price and quantity within the lumber market. In each question, you must determine which of the shifts listed below that question best explain the change in equilibrium price and quantity provided in the question. E.g., in question 8, if you believe that a decrease in both the equilibrium price and quantity is best explained by an increase in supply, then your answer would be response "a".

14. Assume that in the lumber market, there is an increase in both the equilibrium price and the equilibrium quantity. Which of the following best explains this change in the equilibrium:
a. Increase in supply
b. Decrease in supply
c. Increase in demand
d. Decrease in demand
e. Increase in demand and increase in supply
f. Decrease in demand and decrease in supply
g. Increase in demand and decrease in supply
h. Decrease in demand and increase in supply

15. Assume that in the lumber market, there is an increase in the equilibrium price and a decrease in the equilibrium quantity. Which of the following best explains this change in the equilibrium:
a. Increase in supply
b. Decrease in supply
c. Increase in demand
d. Decrease in demand
e. Increase in demand and increase in supply
f. Decrease in demand and decrease in supply
g. Increase in demand and decrease in supply
h. Decrease in demand and increase in supply

16. Assume that in the lumber market, there is a decrease in both the equilibrium price and the equilibrium quantity. Which of the following best explains this change in the equilibrium:
a. Increase in supply
b. Decrease in supply
c. Increase in demand
d. Decrease in demand
e. Increase in demand and increase in supply
f. Decrease in demand and decrease in supply
g. Increase in demand and decrease in supply
h. Decrease in demand and increase in supply

In Questions #17-21 below, you're given information about different elasticities. Based on the information provided in the question, select the response that provides the correct interpretation of the elasticity asked about in the question. E.g., if you calculate the own-price elasticity in Question #17 and interpret that elasticity as saying that washing machines are an inferior good, then your answer would be "c".

17. Assume that for washing machines, a 5% increase in the price of washing machines leads to a 4% decrease in the quantity demanded of washing machines. Select the answer below that represents a correct interpretation of the **own-price elasticity** in this situation:

(a) Washing machines are both a normal good and a luxury
(b) Washing machines are both a normal good and a necessity
(c) Washing machines are an inferior good
(d) Washing machines have a demand that is inelastic
(e) Washing machines have a demand that is elastic
(f) Washing machines are complements
(g) Washing machines are substitutes

18. Assume that in the market for instant noodles (e.g. Top Ramen), a 2% increase in consumer income leads to a 3% decrease in the quantity demanded of this good. Select the answer below that represents a correct interpretation of the **income elasticity** in this situation:

(a) Instant noodles are both a normal good and a luxury
(b) Instant noodles are both a normal good and a necessity
(c) Instant noodles are an inferior good
(d) Instant noodles have a demand that is inelastic
(e) Instant noodles have a demand that is elastic
(f) Instant noodles are complements
(g) Instant noodles are substitutes

19. Assume that for restaurant meals, a 4% increase in consumer income leads to a 3% increase in the quantity demanded of this good. Select the answer below that represents a correct interpretation of the **income elasticity** in this situation:

(a) Restaurant meals are both a normal good and a luxury
(b) Restaurant meals are both a normal good and a necessity
(c) Restaurant meals are an inferior good
(d) Restaurant meals have a demand that is inelastic
(e) Restaurant meals have a demand that is elastic
(f) Restaurant meals are complements
(g) Restaurant meals are substitutes

20. Many households will buy a printer to use with their computer, but of course in order to print anything on the printer, households must also buy ink cartridges that they can install in the printer in order to print. Assume that if the price of printers increases by 5%, consumers will purchase 2% fewer ink cartridges. Select the answer below that represents a correct interpretation of the **cross-price elasticity** in this situation:

(a) Printers and ink cartridges are both normal goods and luxuries
(b) Printers and ink cartridges are both normal goods and necessities
(c) Printers and ink cartridges are both inferior goods
(d) Printers and ink cartridges both have a demand that is inelastic
(e) Printers and ink cartridges both have a demand that is elastic
(f) Printers and ink cartridges are complements
(g) Printers and ink cartridges are substitutes

21. In the ride sharing market, Lyft and Uber both use surge pricing models that lead to charging higher prices during periods of high demand, but it's at least possible that a price increase for one company does not necessarily occur at the same time as a price increase by the other company. Assume that if the price charged by Lyft increases by 5% at a specific point in time, consumers will purchase 10% more rides with Uber at that point in time. Select the answer below that represents a correct interpretation of the **cross-price elasticity** in this situation:

(a) Transportation services provided by Lyft and Uber are both normal goods and luxuries
(b) Transportation services provided by Lyft and Uber are both normal goods and a necessities
(c) Transportation services provided by Lyft and Uber are both inferior goods
(d) Transportation services provided by Lyft and Uber both have a demand that is inelastic
(e) Transportation services provided by Lyft and Uber both have a demand that is elastic
(f) Transportation services provided by Lyft and Uber are complements
(g) Transportation services provided by Lyft and Uber are substitutes

Use the information below to answer questions #22-23.

In the soft drink market, there are regular soft drinks (e.g. Coca Cola, Pepsi, etc), and diet soft drinks (e.g. Diet Coke, Diet Pepsi, etc). According to one particular study, the own-price elasticities of these two goods are as follows.

- Regular soft drinks have an own-price elasticity of -0.63
- Diet soft drinks have an own-price elasticity of -1.01

22. Based on the information above, consider the own price elasticity of regular and diet soft drinks. In this situation, you must determine how the quantity demanded of each type of soft drink responds to a 6% price increase. *Note that you will need to follow the formatting instructions for your answers below.*

a. If the price of regular soft drinks increases by 6%, then the quantity of regular soft drinks purchased by households will decrease by _____%

b. If the price of diet soft drinks increases by 6%, then the quantity of diet soft drinks purchased by households will decrease by _____%

23. Given the own-price elasticities of regular and diet soft drinks provided above, assume there is a 5% increase in the price of all soft drinks (i.e. both regular and diet). **Select every true statement** below regarding how this price change affects the total revenue associated with selling these two different types of soft drink. *Note that there multiple answers to this question.*

(a) If the price of diet soft drinks increases, then there will be a decrease in the total revenue earned from selling diet soft drinks

(b) If the price of regular soft drinks increases, then there will be a decrease in the total revenue earned from selling regular soft drinks

(c) If the price of diet soft drinks increases, then there will be an increase in the total revenue earned from selling diet soft drinks

(d) If the price of regular soft drinks increases, then there will be an increase in the total revenue earned from selling regular soft drinks

(e) If the price of diet soft drinks increases, then there will be no change in the total revenue earned from selling diet soft drinks

(f) If the price of regular soft drinks increases, then there will be no change in the total revenue earned from selling regular soft drinks

24. Assume that the demand and supply curves for good A are given as the equations you see below. *Note that you need to follow the formatting instructions with your answers below.*

Demand: $P = 800 - 2Q_D$ (Q_d = quantity of A demanded, P = price)
Supply: $P = 200 + 3Q_S$ (Q_s = quantity of A supplied)

a. The equilibrium quantity in this market is _____

b. The equilibrium price in this market is _____

25. Assume that the demand and supply curves for good A are given as the equations you see below. *Note: these are the same equations from Question #24 above.*

Demand: $P = 800 - 2Q_D$ (Q_d = quantity of A demanded, P = price)
Supply: $P = 200 + 3Q_S$ (Q_s = quantity of A supplied)

Assume that government has placed a price ceiling on the market for good A. If the price ceiling is set at $350, then which one of the following (direct) effects is the most likely to occur:

(a) Surplus of 70 units
(b) Shortage of 70 units
(c) Surplus of 105 units
(d) Shortage of 105 units
(e) Surplus of 175 units
(f) Shortage of 175 units
(g) Surplus of 210 units
(h) Shortage of 210 units
(i) None of the above