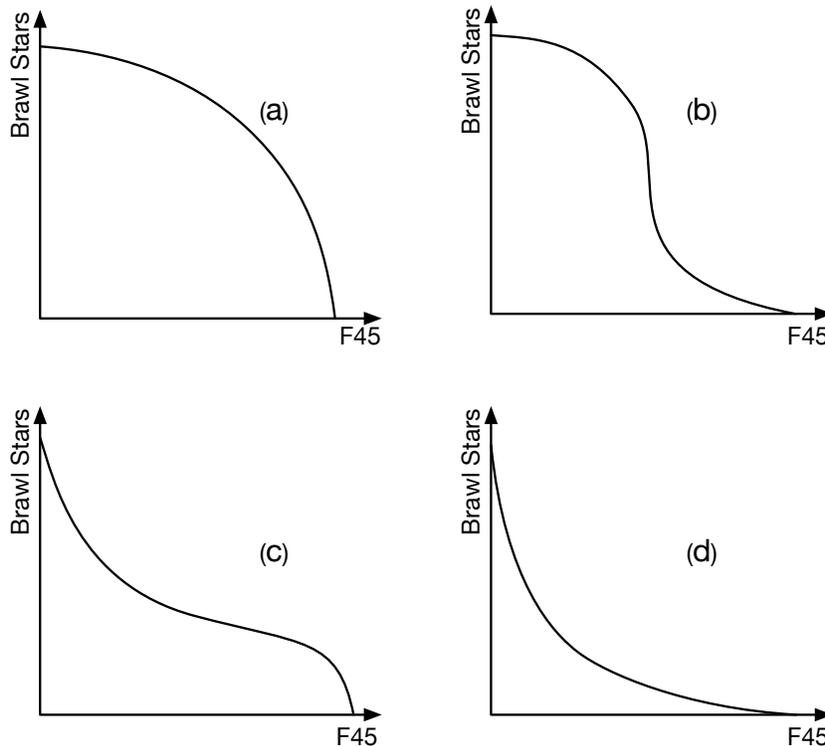


## Handout 2

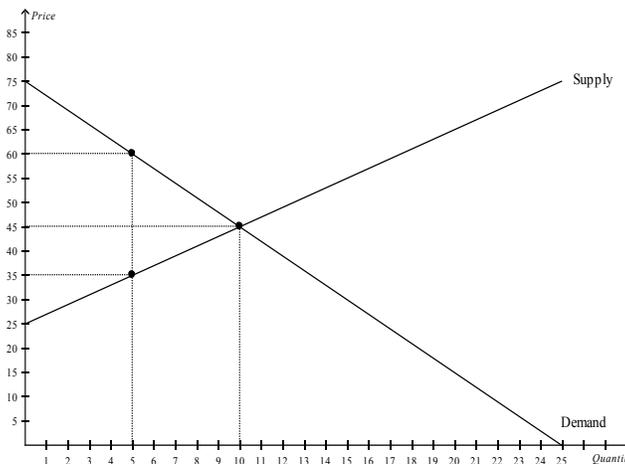
### 1 Exercises

1. Igor can devote his time to either play *Brawl Stars* or go to ARC and do *F45*. It always takes 3 minutes to play *Brawl Stars*. Igor becomes more skilled as he do more workouts. For example, his first section takes 1 minute but his fifth section takes 30 seconds. However, if he work too much, he starts to get tired and needs more time to complete a section, i.e. his 50<sup>th</sup> section takes 10 minutes. Given these information, which of the following graphs could represent Igor's PPF of *Brawl Stars* and *F45*?



2. Suppose *iPhone 11* and *Pixel 4* are substitutes in consumption. After a change in the price of *iPhone 11*, we observe that the equilibrium price of *Pixel 4* goes up. Given this information, what can we conclude about the change in the price of *iPhone 11*?
- (a) The price of *iPhone 11* went up.
  - (b) The price of *iPhone 11* went down.
  - (c) The price of *iPhone 11* stayed the same.
3. Draw a graph of supply and demand, mark the equilibrium price and quantity, then show the effect of each of the following scenarios and mark the new equilibrium price and quantity.
- (a) An increase in the price of coffee on the market for donuts, where coffee and donuts are complements.
  - (b) A decrease in the price of coffee beans, an input in the production of coffee, on the market for coffee.
  - (c) An increase in the number of buyers and sellers of pearl milk tea on the market for pearl milk tea.

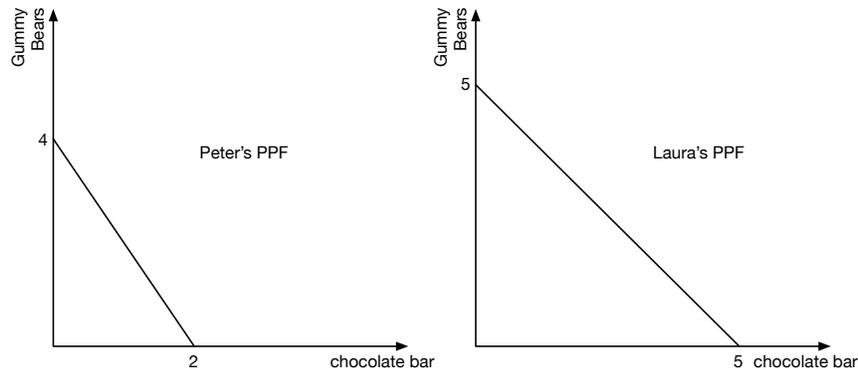
4. Wells and Tom have linear production possibility frontiers with respect to solving Economics problem and Real Analysis questions. Wells can solve 3 Economics problems or 2 math problems every 3 hours. Tom can solve 4 Economics problem or 3 math problems every hour. Given this information and holding everything else constant, who has the comparative advantage in solving Economics problems?
  - (a) Wells
  - (b) Tom
5. Draw and label four graphs of supply and demand, one with a binding price floor, one with a non-binding price floor, one with an binding price ceiling, and one with a non-binding price ceiling.
  - (a) Which of these results in a shortage? Which in a surplus?
  - (b) Draw and state the effect on consumer surplus and producer surplus in each binding case.
6. What is the difference between “change in **demand**” and “change in **quantity demanded**” ?
7. Which of the following will not shift the demand curve for brownies to the right?
  - (a) An increase in the price of cupcakes, a substitute for brownies.
  - (b) A decrease in the price of milk, a complement of brownies.
  - (c) An increase in income for all buyers and assuming that brownies are normal goods.
  - (d) An increase in the price of brownies.
8. From the following graph:



If the government imposes a price floor of \$60 in this market, then the total surplus will be

- (a) \$110.5
  - (b) \$125
  - (c) \$187.5
  - (d) \$225.25
9. Consider a good with a downward sloping demand curve. Which of the following changes will cause the demand curve to shift to the right?
    - (a) Income increase and the good is an inferior good.
    - (b) The price of labor, an input in the production of the good, decreases.
    - (c) The price of the good decreases.
    - (d) The price of a substitute good in consumption increases.

Use the PPFs below to answer the following two questions.



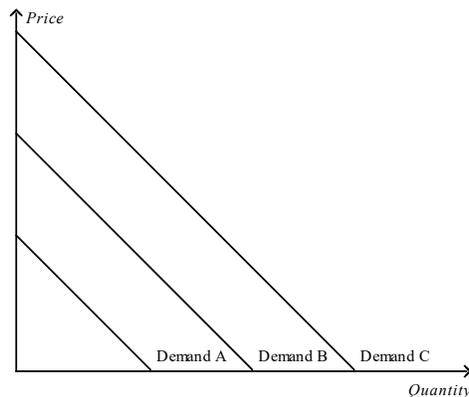
10. What is the opportunity cost of producing one bar of chocolate for Peter?
- (a)  $\frac{1}{2}$  bags of gummy bears
  - (b) 2 bags of gummy bears
  - (c) 4 bags of gummy bears
  - (d) 6 bags of gummy bears
11. Who has the comparative advantage in producing gummy bears and who has the absolute advantage in producing gummy bears?
- (a) Laura has the absolute advantage and comparative advantage in producing dummy bears.
  - (b) Laura has the absolute advantage in producing gummy bears but Peter has the comparative advantage in producing gummy bears.
  - (c) Peter has the absolute advantage in producing gummy bears but Laura has the comparative advantage in producing gummy bears.
  - (d) Peter has the absolute advantage and comparative advantage in producing gummy beats.
12. Consider the following chart:

Price	Firm A's quantity supplied	Firm B's quantity supplied	Firm C's quantity supplied	Firm D's quantity supplied
\$0	0	0	0	0
\$2	3	4	2	1
\$4	6	8	4	2
\$6	9	12	6	3
\$8	12	16	8	4
\$10	15	20	10	5

If these are the only four sellers in the market, then the market quantity supplied at a price of \$6 is

- (a) 10
- (b) 20
- (c) 30
- (d) 40

13. Referring to the graph below



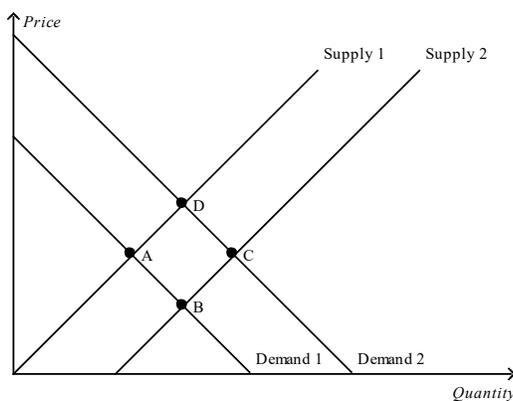
- Which of the following would cause the demand curve to shift from Demand B to Demand C in the market for DVDs in the United States?
- (a) a decrease in the price of DVDs
  - (b) a decrease in the number of people in the United States
  - (c) a decrease in the price of DVD players
  - (d) a change in consumer preferences toward watching movies in movie theaters rather than at home
14. Follow from the previous graph, which of the following would cause the demand curve to shift from Demand C to Demand A in the market for tennis balls in the United States?
- (a) a decrease in the price of tennis racquets
  - (b) an increase in the price of tennis balls
  - (c) an expectation by buyers that their incomes will increase in the very near future
  - (d) a decrease in the number of people in the United States under age 70
15. Which of the following statements about a model are true?
- A model represents reality.
  - A model is a way to explore a question we have about the world.
  - To be helpful a model must be able to fit the existing data as well as the incoming data.
  - Over time a model may be discarded once new data becomes available.
- (a) One statement is true.
  - (b) Two statements are true.
  - (c) Three statements are true.
  - (d) Four statements are true.
16. A drought in California destroys many red grapes. As the result of the drought, the consumer surplus in the market for red grape
- (a) increases, and the consumer surplus in the market for red wine increases.
  - (b) decreases, and the consumer surplus in the market for red wine decreases.
  - (c) increases, and the consumer surplus in the market for red wine decreases.
  - (d) decreases, and the consumer surplus in the market for red wine increases.

17. Answer the question based on the following table

	An Increase in Supply	A Decrease in Supply
An Increase in Demand	A	B
A Decrease in Demand	C	D

Which combination would produce an increase in equilibrium quantity and an indeterminate change in equilibrium price?

- (a) A
  - (b) B
  - (c) C
  - (d) D
18. Suppose roses are currently selling for \$20 per dozen, but the equilibrium price of roses is \$30 per dozen. We would expect a
- (a) surplus to exist and the market price of roses to decrease.
  - (b) shortage to exist and the market price of roses to decrease.
  - (c) shortage to exist and the market price of roses to increase.
  - (d) surplus to exist and the market price of roses to increase.
19. Answer the following two questions based on the graph: Which of the following movements would



illustrate the effect in the market for chocolate chip cookies of a decrease in the price of flour?

- (a) Point A to Point B
  - (b) Point C to Point B
  - (c) Point A to Point D
  - (d) Point C to Point D
20. Which of the following movements would illustrate the effect in the market for paper napkins as a result of a "Go Green" advertising campaign encouraging people to use cloth napkins?
- (a) Point A to Point B
  - (b) Point C to Point D
  - (c) Point A to Point D
  - (d) Point C to Point B