

Problem Set 1

1) The economy of the university town of Avicenna (if you wish, cf.: Peter Beagle (1986): *The Folk of the Air* <http://amzn.to/1RxRFQJ> (New York: Del Rey: 0345337824)) produces two and only two commodities: yoga lessons, and lattes. The ten workers in the economy are able to produce the following amounts of lattes and teach the following amounts of yoga lessons each day:

Worker	Yoga Lessons	Lattes
Alfred	50	500
Beatrice	100	500
Cixi	150	500
Dante	200	500
Earendil	250	500
Faramir	300	500
Gaius	350	500
Hrothgar	400	500
Indira	450	500
Jenghiz	500	500

a) On a graph, draw the Production Possibility Frontier of Avicenna

b) On a graph, draw the supply curve for lattes if the price of yoga lessons is \$10/lesson.

c) If the market price of yoga lessons is \$10/lesson and the price of lattes is \$5.10/latte: Who produces lattes? Who teaches yoga? How many lattes are produced? How many yoga lessons are taught?

d) If the market price of yoga lessons is \$10/lesson and the price of lattes is \$0.50/latte: : Who produces lattes? Who teaches yoga? How many lattes are produced? How many yoga lessons are taught?

e) If the market price of yoga lessons is \$10/lesson and the price of lattes is \$8.05/latte: Who produces lattes? Who teaches yoga? How many lattes are produced? How many yoga lessons are taught?

f) If the market price of yoga lessons is \$20/lesson and the price of lattes is \$8.05/latte: : Who produces lattes? Who teaches yoga? How many lattes are produced? How many yoga lessons are taught?

g) If the market price of yoga lessons is \$40/lesson and the price of lattes is \$6/latte: : Who produces lattes? Who teaches yoga? How many lattes are produced? How many yoga lessons are taught?

2) The economy of the university town of Avicenna (if you wish, cf.: Peter Beagle (1986): *The Folk of the Air* <http://amzn.to/1RxRFQJ> (New York: Del Rey: 0345337824)) produces two and only two commodities: yoga lessons, and lattes. When the price of yoga lessons is \$10/lesson, the supply curve for lattes is:

SUPPLY: $P = 0 + Q_s/500$ up to a maximum quantity produced of 5000 lattes

a) On a graph, draw the supply curve for lattes if the price of yoga is \$20/lesson. Also draw the supply curve for lattes if the price of yoga is \$40/lesson.

b) What do you think the Production Possibility Frontier of Avicenna is? Draw what you think is the PPF. Explain why you think this is the PPF.

c) If the market price of yoga lessons is \$10/lesson and the price of lattes is \$5/latte: How many lattes are produced? How many yoga lessons do you think are taught?

d) If the market price of yoga lessons is \$10/lesson and the price of lattes is \$1/latte: How many lattes are produced? How many yoga lessons do you think are taught?

e) If the market price of yoga lessons is \$10/lesson and the price of lattes is \$8/latte: How many lattes are produced? How many yoga lessons do you think are taught?

f) If the market price of yoga lessons is \$20/lesson and the price of lattes is \$8/latte: How many lattes are produced? How many yoga lessons do you think are taught?

g) If the market price of yoga lessons is \$40/lesson and the price of lattes is \$6/latte: How many lattes are produced? How many yoga lessons do you think are taught?

h) If the market price of yoga lessons is \$5/lesson and the price of lattes is \$1/latte: How many lattes are produced? How many yoga lessons do you think are taught?

3) In the economy of Avicenna, when the price of yoga lessons is \$10, the supply curve for lattes is:

$$\text{SUPPLY: } P = 0 + Q_s/500$$

and the demand curve is:

$$\text{DEMAND: } P = 10 - Q_d/500$$

a) On a graph, draw the supply and demand curves

b) What is the equilibrium price and quantity of lattes?

c) Suppose that the government simply announced that, because wages of yoga teachers should be higher, henceforth yoga lessons would cost not \$10 but \$20 and made that stick. What do you think the supply curve would then be?

d) If the demand curve stayed the same, what would the new equilibrium price and quantity of lattes would be with yoga lesson now costing \$20?

e) Do you think the demand curve would stay the same in the event of this change? Explain why or why not. What do you think the equilibrium price and quantity of lattes would be?

4) In the economy of Avicenna, when the price of yoga lessons is \$10, the supply curve for lattes is:

$$\text{SUPPLY: } P = 0 + Q_s/500$$

a) What is the equilibrium price and quantity if the demand curve is: $P = 10$?

b) What is the equilibrium price and quantity if demand is: $P = 10 - Q_d/500$?

c) What is the equilibrium price and quantity if demand is: $P = 20 - Q_d/500$?

d) What is the equilibrium price and quantity if demand is: $P = 10 - Q_d/1000$?

5) In the economy of Avicenna, when the price of yoga lessons is \$10, the supply curve for lattes is:

$$\text{SUPPLY: } P = 5 + Q_s/2000$$

a) What is the equilibrium price and quantity if demand is: $P = 10 - Q_d/500$?

b) What is the equilibrium price and quantity if demand is: $P = 20 - Q_d/500$?

c) What is the equilibrium price and quantity if demand is: $P = 10 - Q_d/1000$?

d) What is the equilibrium price and quantity if demand is: $P = 10$?