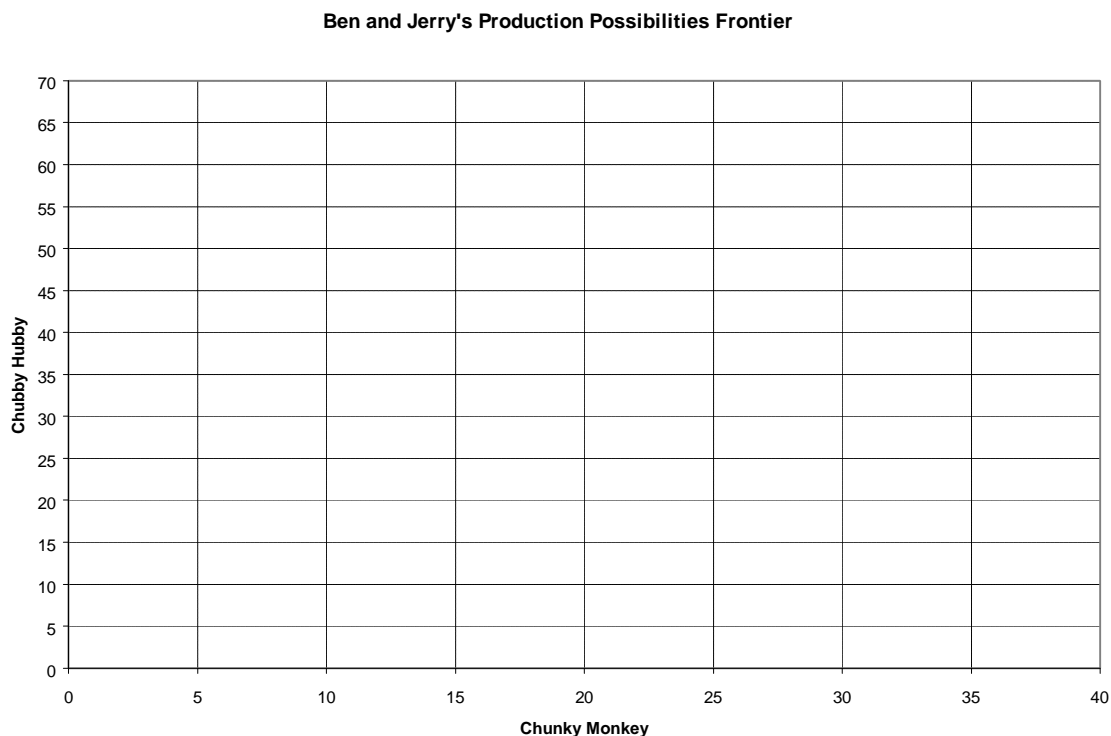


Econ 22060 Principles of Microeconomics  
Spring, 2003  
Dr. Kathryn Wilson  
Due Date: Tuesday, February 3<sup>rd</sup>

### Homework 1

1. Ben and Jerry make two types of ice cream: Chubby Hubby and Chunky Monkey. For each hour that Ben and Jerry work, they can make either 6 quarts of Chubby Hubby or 3 quarts of Chunky Monkey. Ben and Jerry work 8 hours each day.

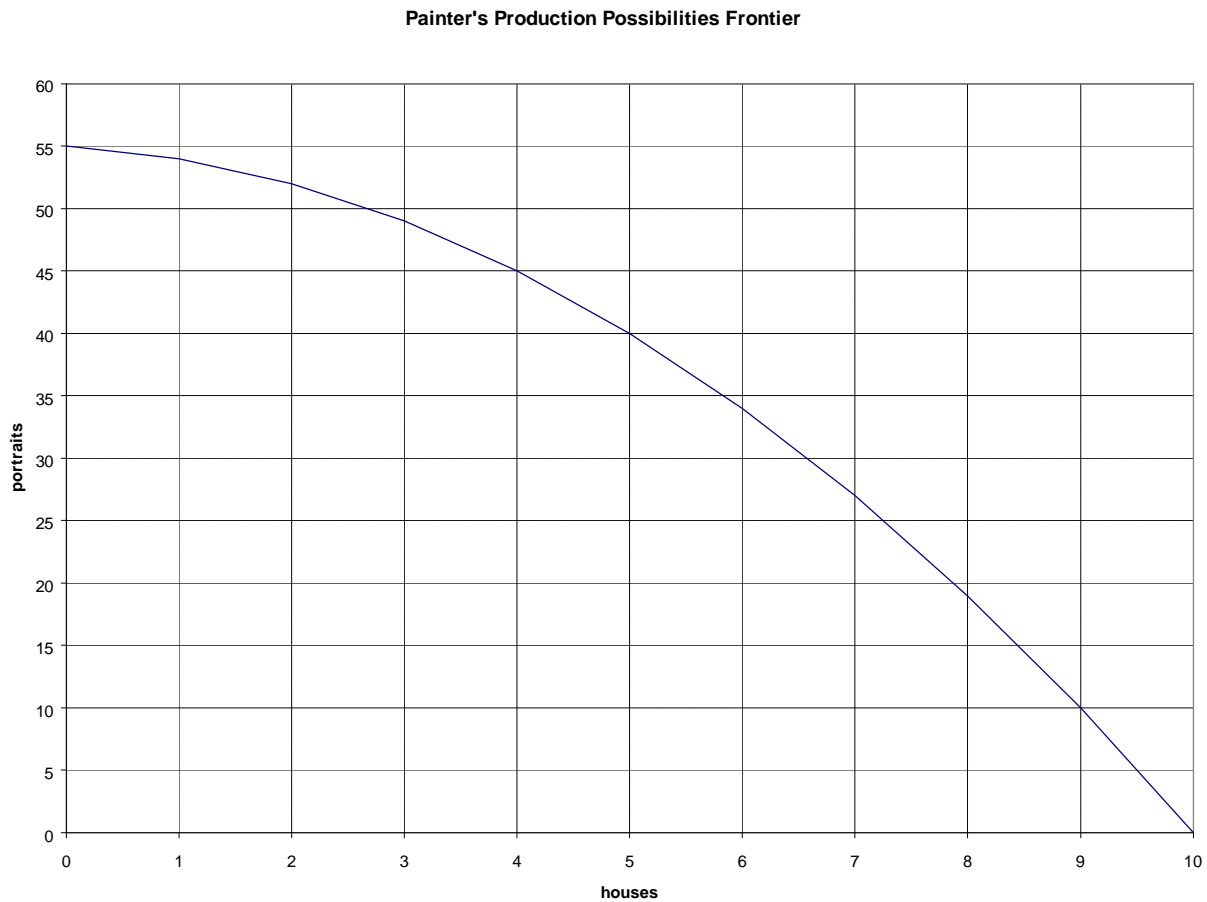
a. Graph Ben and Jerry's production possibilities frontier for a day where they work 8 hours.



b. Suppose Ben and Jerry are currently producing 24 quarts of Chubby Hubby and 12 quarts of Chunky Monkey. What is the opportunity cost of producing another quart of Chunky Monkey? Explain.

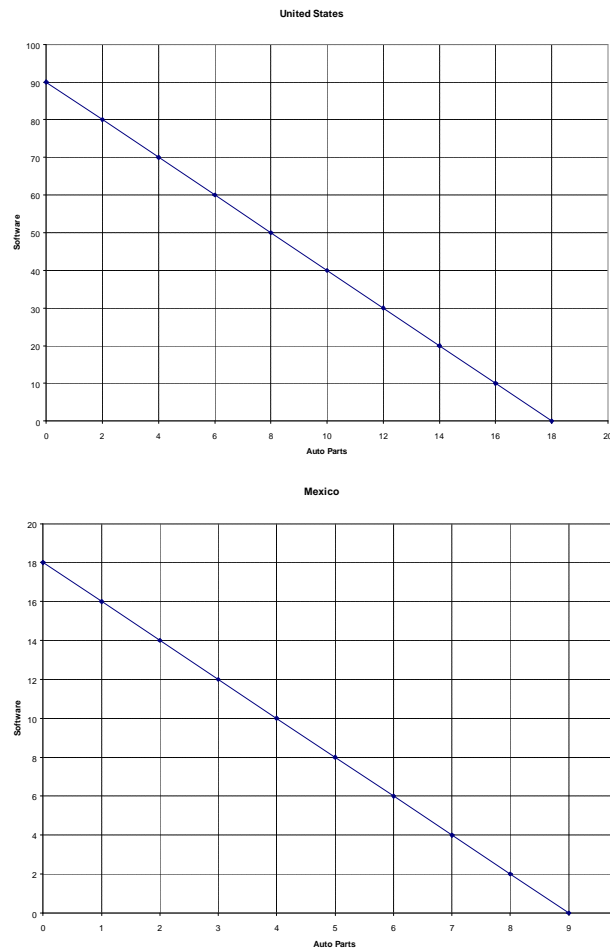
c. Suppose Ben and Jerry are currently producing efficiently (somewhere on the production possibilities frontier). Does Ben and Jerry's opportunity cost of producing another quart of Chunky Monkey depend on their current location on the production possibilities frontier? Do they have increasing opportunity costs? Explain.

2. The following graph shows the production possibilities frontier for a painter who paints houses but also paints portraits.



- What is the opportunity cost of 1 more house if the painter is currently painting 4 houses?
- Does the painter have increasing opportunity costs? How do you know?
- Draw three points on the graph where point A is unattainable, point B is efficient, and point C is attainable but inefficient.
- What two things could shift the painter's production possibilities frontier? Provide an example of each of these that is specific to the painter.

3. The following two graphs show the production possibility frontiers for the United States and Mexico in the production of automobile parts and computer software.



- What is the opportunity cost for one more auto part for the United States? For Mexico?
- What country has an absolute advantage in making auto parts? What country has an absolute advantage in making software? What does absolute advantage mean?
- What country has a comparative advantage in making auto parts? What country has a comparative advantage in making software? What does comparative advantage mean?
- If the U.S. and Mexico were to trade, which country should make auto parts? Give an example of a possible trade that would make both countries better off.

4. The following table shows the demand and supply for video rentals at Video 101.

Price	Quantity Demanded	Quantity Supplied
\$0	500	0
\$0.50	450	50
\$1.00	400	100
\$1.50	350	150
\$2.00	300	200
\$2.50	250	250
\$3.00	200	300
\$3.50	150	350
\$4.00	100	400

a. To the right of the table, draw a graph of the demand curve and supply curve. (Make sure you label your axis.)

b. What is the equilibrium price and quantity?

c. If the price of videos were \$3.50, would there be a shortage or surplus? How big would it be?

5. What would be the effect of the following on the demand curve, the supply curve, equilibrium price, and equilibrium quantity of baseball hats that say “KSU Football”? (Note: you don’t need any numbers – just draw a simple graph showing how the curves would shift and write what would happen to price and quantity.)

a. The football team goes undefeated for the season and wins the national championship.

b. The taxpayers in Ohio decide college should be free and give all KSU students a refund of their tuition.

c. A major hurricane hits the south and wipes out the cotton plants.

d. The price of “Ohio State Football” baseball hats goes up.