Write your name on the cover of the test booklet and nowhere else. Enclose this sheet with the booklet. Failure to follow these directions will cost you 1 point. The test has 100 points (to be scaled up to 170 points) and is scheduled to take 50 minutes. Therefore, expect to spend 1 minute for every 2 points. For example, a 14-point question should take 7 minutes. I cannot give extra time because some students have a class after your class.

1) (12 points) Answer EITHER Part A OR Part B.
A) What is the slope of the indifference curve which has hats on the vertical axis and telephones on the horizontal axis? Prove your answer is correct.
B) The assumption that "more is better than less" has two implications for the indifference curves. What are they? Explain your logic.

2) (14 points) Answer EITHER Part A OR Part B.
A) Use the table to the right to calculate the cross-price elasticity between apples and pears using the arc formula. Show all work and briefly explain why you chose those rows. What information does that tell us about them?
B) What number would you expect for the cross-price elasticity for cut roses and vases. Explain how you chose that number and what range you could have chosen.

P_{apples}	P_{pears}	Income	Q_{apples}
\$10/lb	\$/7/lb	\$8,000	25 lbs
\$10/lb	\$9/lb	\$12,000	25 lbs
\$10/lb	\$9/lb	\$8,000	15 lbs
\$5/lb	\$9/lb	\$12,000	30 lbs

3) (14 points) Answer EITHER Part A OR Part B.
A) Suppose at a price of \$1/gallon the supply of milk is 200 gallons, but at a price of \$1.50/gallon the supply is \$400 gallons. Calculate the elasticity of supply using the point formula. Show all work. What does this tell us about the supply of milk? Briefly explain your logic.
B) Suppose that when your income is \$80/week you buy 9 bananas, and when your income is \$120/week, you buy 11 bananas. Calculate the income elasticity using the arc formula. Show all work. What does this tell us about the demand for bananas? Briefly explain your logic.

4) (16 points) Answer EITHER Part A OR Part B.
A) What do you think would be a good number for the own-price elasticity of gasoline in the short-run? Why did you choose that number? What do you think would be a good number for the own-price elasticity of gasoline in the long-run? Why did you choose that number?
B) Define "arbitrage" and briefly explain why it is an important concept for discussing markets. If the CPI in 2010 is 210 and the CPI in 1976 was 70, then what would be the real price a \$90 textbook in 2010 in 1976 prices? Show all work and briefly explain what you did.

5) (20 points) Answer EITHER Part A OR Part B.
A) Illustrate the effects of the flooding in the farmland of Pakistan on the supply and demand for wheat. Explain why the curve(s) moved as drawn. What happens to the price and quantity?
B) Illustrate the effects of an increase in the price of cloth on the supply and demand for dresses. Explain why the curve(s) moved as drawn. What happens to the price and quantity?

6) (24 points) Answer EITHER Part A OR Part B.
A) Draw the budget constraint for cufflinks and fancy shirts which require cufflinks assuming your budget is \$440, cufflinks cost \$10/pair and the shirts cost \$100/shirt. Explain how you found the line. Draw three indifference curves using the assumption that they are perfect complements and making sure that one of them can be used to find the equilibrium level of consumption of each good. Explain why the indifference curves took their shape. How many of each good do you buy? Explain your logic.
B) Draw a normally shaped budget constraint/indifference curve diagram for televisions and chairs. You can use specific numbers or just use generic lines with no scale. Draw an decrease in the price of a TV. Explain why the curve(s) moved as drawn. Find the old and new quantity of each good purchased.