Write your name on the cover of the test booklet and nowhere else. 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 the other section did not get any.

1) I created some regression results for the demand of bananas based upon the price of cherries, the price of bananas, income, and the amount of advertising the banana growers did. The results are:

Regression Statistics					
Multiple R	0.9001				
R Square	0.8888				
Adjusted R Square	0.7835				
Standard Error	3.235				
Observations	42				

Analysis of Variance	df	Sum of Squares	Mean Square	F	Significance F
Regression	4	418.4773	139.4924	3.012	0.030136
Residual	37	263.1237	26.31237		
Total	41	681.601			

	Coefficients	Standard Error	t Statistic	P-value	Lower 95.00	Upper 95.00
Intercept	12.4512	8.511138	1.46293	0.151111	-6.5128	31.4152
Price of Cherries	-22.345	11.42362	-1.95603	0.057298	-47.7984	3.108412
Price of Bananas	-28.3213	12.5137	-2.26322	0.028982	-56.2036	-0.43905
Income	0.002223	0.000614	3.618571	0.000805	0.000854	0.003592
Advertising	0.103423	0.06135	1.685704	0.186473	-0.041283	0.195563

A) (10 points) What is the predicted equation for the demand function of bananas? How accurate is the formula? Explain your logic.

B) (10 points) Which variables are significant and which are not? How can you tell?

C) (6 points) Given the statistics, do you feel bananas and cherries are substitutes, complements, likely substitutes, likely complements, or too difficult to tell? Explain your logic.

D) (6 points) Would you do advertising? Why or why not?

E) (10 points) If the price of cherries was $2/lb, the price of bananas, $1/lb, your income, $60,000, and the firm did $100 worth of advertising, then how many bananas would you expect to be bought? Show all work.

2) (12 points) Answer EITHER Part A OR Part B.

A) What is the formula for the slope of the isocost curve? Why is it that formula?

B) How can we get the long-run total cost curve from the expansion path on isocost/isoquant diagram? Explain it without drawing the diagram.

3) (16 points) Answer EITHER Part A OR Part B.

A) Draw an isoquant/isocost diagram for a situation where capital and labor are perfect complements. Explain why the diagram looks as you drew it.

B) What is the equi-marginal condition for a firm? Explain why that equation would help maximize profits.

4) (30 points) Answer EITHER Part A OR Part B.

A) Draw an indifference curve/budget constraint diagram for raspberries and blueberries. Have the initial income be $20, the price of raspberries is $5/lb, and the price of blueberries is $2/lb. Draw an increase in the price of blueberries to $4/lb. Draw the diagram such that they are substitutes. Show the income and substitution effects. Explain why the curve(s) moved as drawn, how you found the income and substitution effects, and how you can tell they are substitutes.

B) Draw an indifference curve/budget constraint diagram for shampoo and conditioner. Have the initial income be $24, the price of shampoo is $6/bottle, and the price of conditioner is $2/bottle. Illustrate what happens when the price of conditioner changes to $3/bottle, then to $4/bottle, and finally to $6/bottle. Use this information to draw the demand curve for conditioner. Explain why the curve(s) moved as drawn and how you found the points on the demand curve.