First Exam

Write all answers in your blue book and show all work there. Return your exam and printout(s) in your blue book.

10 pts.

1) Crazy Richard's Corp. has 2 products, Chunky and Smooth, and must soon decide which of the 2 product lines to upgrade. The investment is each is the same but the revenues are different. Which revenue stream is better? Show all work.

	Year 1	Year 2	Year 3
Chunky:	100	100	100
Smooth:	90	100	110

Note that the discount rate is .10 and that the Chunky revenues are received at year's end while the Smooth revenues are received on a daily basis throughout the year.

25 pts.

2) The following table gives possible profits (received at year end) and probabilities for two years.

Year 1		Year 2	
profit	prob.	profit	prob.
500	.4	600	.3
1000	.6	1000	.7

a) Sketch a tree diagram to organize your calculations.

b) If the discount rate is .08, find the expect present value of profit and the standard deviation of that profit.

20 pts.

3) If the expected present value of profit for product line A is 400 with $\sigma = 20$ and the expected present value of profit for product line B is 600 with $\sigma = 60$, discuss which product line is a more attractive choice. Employ three kinds of decision criteria.

20 pts

4) Richard has observed that when price is 2 dollars $Q = 100,000$ and when price is 2.25 dollars $Q = 80000$.

a) Assume that these points are on the same demand curve and find a value for elasticity.

b) Given this information and marginal cost equal to $1, is price in the right range to maximize profit?

25 pts

5) Consider the demand regression given below.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.698	.487	.358	5.5968

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.665	5.442		1.408	.184
	Price	-.724	.225	.689	-3.211	.007
	Income	.268	.192	.291	1.395	.188
	Advertising	-1.086	1.823	-.127	-.596	.562

a. Dependent Variable: Quantity Demanded

a) If Price = 2, Advertising = 1 and Income = 5, find the elasticity of demand.

b) Do the independent variables all seem to have the right signs? Which of them have statistically significant effects on Q_d? Explain.

c) How well does the equation explain the variation of demand?

d) Discuss an econometric problem of your choice and say how it might affect demand estimation.

I have neither given nor received unfair aid on this test nor am I aware of anyone else who has.

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