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Modeling Prices in an Auction - Quiz

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Question 1


1/1 point (graded)

Taking the same set of 2, 4, 6, 8, or 10 buyers, assume that expected profits from an auction are given by the formula $\frac{N-1}{N+1}$. Now fill in V, W, X, Y, and Z.


Number of Buyers	Optimal Price	Probability	Expected Profit, Posted Price	Expected Profit, Auction
2	A	F	K	V
4	B	G	L	W
6	C	H	M	X
8	D	I	N	Y
10	E	J	O	Z

▼ **Module 5: Moments of a Random Variable, Applications to Auctions, & Intro to Regression**

Moments of a Distribution and Auctions

Finger Exercises due Oct 31, 2016 at 05:00 IST 

Expectation, Variance, and an Introduction to Regression

Finger Exercises due Oct 31, 2016 at 05:00 IST 

Module 5: Homework

Homework due Oct 24, 2016 at 05:00 IST 

► **Exit Survey**

Note: Do **NOT** add add a dollar sign before your answer. For example if your answer is \$0.32 input 0.32. Also, round you answers to 2 decimal places. For example, if the correct answer is 0.672, please input 0.67 and if it is 0.676 please input 0.68.

Value for V:

✓ Answer: 0.33

Value for W:

✓ Answer: 0.60

Value for X:

✓ Answer: 0.71

Value for Y:

✓ Answer: 0.78

Value for Z:

✓ Answer: 0.82

Explanation

You simply substitute in for N into the formula. The completely filled in table should look like:

Number of Buyers	Optimal Price	Probability	Expected Profit, Posted Price	Expected Profit, Auction
2	\$0.58	0.67	\$0.39	\$0.33
4	\$0.67	0.80	\$0.54	\$0.60
6	\$0.72	0.86	\$0.62	\$0.71
8	\$0.76	0.89	\$0.68	\$0.78
10	\$0.79	0.91	\$0.72	\$0.82

You have used 1 of 2 attempts

✓ Correct (1/1 point)

Question 2

1/1 point (graded)

In the example discussed in class and the example above, which of the following are found to be true about the nature of selling goods with a posted price versus via an auction? (Select all that apply.)

- ☒ a. To select the optimal posted price, you need to know the distribution of valuations ✓
- ☐ b. To select the optimal posted price, you do not need to know the distribution of valuations
- ☒ c. Auctions become more profitable relative to posted prices when there are more potential buyers ✓
- ☐ d. It is important to know the distribution of buyer valuations when you are running an auction



Explanation

First, in order to select the optimal posted price, you would need to accurately know the distribution of buyers' valuations. In contrast, you do not need to know the distribution of buyers' valuations to maximize expected profit in an auction. The second noteworthy finding is that auctions tend to be more profitable than sale under a posted price as the number of potential buyers increases.

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You have used 1 of 2 attempts

✓ Correct (1/1 point)

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