

Quiz 2, Grading Rubric

Task	Points
<i>Question 1</i>	
Made fewer than 2 spelling/grammar errors in the discussion	2
Stated that the statement is false or uncertain	2
Reasoned that revenues increase from price increases on the inelastic portion of the demand curve.	5
Reasoned that revenues decrease from price increases on the elastic portion of the demand curve.	5
Provided some reasoning about potential reputation effects, making the statement uncertain rather than completely false.	1
<i>Question 2</i>	
Correctly recognized that, $\varepsilon^D = \frac{\% \Delta Q}{\% \Delta P} = -\frac{12}{5} = -2.4$	3
At the given price and quantity, used the elasticity to solve for the slope, $\beta = \varepsilon^D \frac{Q}{P} = -2.4 \times \frac{1000}{200} = -12$	3
Used slope and price and quantity to solve for the intercept, $1000 = \alpha - 12(200) \rightarrow \alpha = 3400$	3
Defined the demand function, $Q = 3400 - 12P$	2
Defined the total revenue function, $TR = Q \times P = 3400P - 12P^2$	2
Correctly solved for the first order condition of the total revenue function with respect to price, $\frac{dTR}{dP} = 3400 - 24P$	2
Solved for the optimal price, $P^* = 142$	2
Checked the second order condition to determine that the price maximized total revenue	1
Solved for the revenue maximizing quantity, $Q^* = 1700$	2

Task	Points
<i>Question 3</i>	
Part (a)	
Correctly specified the empirical demand function of interest, $Q = \alpha + \beta P + \varepsilon$	5
Part (b)	
Correctly calculated $\beta = \frac{S_{Q,P}}{S_P^2} = \frac{-3.27}{89.14} = -0.037$	10
Correctly calculated $\alpha = \bar{Q} - \hat{\beta}\bar{P} = 187 - (-0.037)(9.55) = 187.35$	5
Part(c,i)	
Correctly re-specified the empirical demand function as, $Q = \alpha + \beta_1 P + \beta_2 I + \varepsilon$	5
Part(c,ii)	
Made fewer than 2 spelling/grammar errors in the discussion	2
Reasoned that the elasticity associated with the previous model could not be trusted because there is a correlation between price and income. Therefore, excluding income from the model would result in an incorrect estimate of the marginal effect of price	8