AGBE 321, Fall 2015

Quiz 2, Grading Rubric

Task	Points
Question 1	
Part (a)	
Correctly solved for the quantity of beef at the given prices, $Q_b = 1.3$	1
Correctly solved for the quantity of pork at the given prices, $Q_p = 2.93$	1
Correctly identified then need to solve for four supply elasticities, $\varepsilon^S_{Q_b,P_b}$, $\varepsilon^S_{Q_b,P_p}$, $\varepsilon^S_{Q_p,P_p}$, $\varepsilon^S_{Q_p,P_b}$	1
Correctly solved for $\varepsilon^S_{Q_b,P_b} = 0.45$	1
Correctly interpreted $\varepsilon^S_{Q_b,P_b}$ as being inelastic and that for a 1% change in the price of beef, the quantity of beef supplied changes by 0.45%	2
Correctly solved for $\varepsilon^S_{Q_b,P_p} = -0.71$	1
Correctly interpreted $\varepsilon^S_{Q_b,P_p}$ as indicating that beef and pork are substitutes in production, the effect is inelastic, and that for a 1% change in the price of pork, the quantity of beef supplied changes by –0.71%	2
Correctly solved for $\varepsilon^S_{Q_p,P_p} = 1.26$	1
Correctly interpreted $\varepsilon^S_{Q_p,P_p}$ as being elastic and that for a 1% change in the price of pork, the quantity of beef supplied changes by 1.26%	2
Correctly solved for $\varepsilon^S_{Q_p,P_b} = -0.33$	1
Correctly interpreted $\varepsilon^S_{Q_p,P_b}$ as indicating that pork and beef are substitutes in production, the effect is inelastic, and that for a 1% change in the price of beef, the quantity of pork supplied changes by –0.33%	2
Part (b)	
Correctly solved for the quantity of pork at the given prices, $Q_p = 2.93$	1
Correctly identified that you needed to solve for the flexibility, $\phi^D_{P_b,Q_p}$	1
Directly solved for the flexibility, $\phi^D_{P_b,Q_p} = 1.49\%$ or solved for $\varepsilon^D_{Q_p,P_b} = 0.67\%$ and then solved for $\phi^D_{P_b,Q_p} = 1/\varepsilon^D_{Q_p,P_b} = 1/0.67\% = 1.49\%$	5
Correctly scaled the effect by two to find that for a 2% increase in the quantity demanded of pork, there is a 2.98% increase in the price of beef	3

Task	Points
Question 2	
Recognize that you will need to compare the 2016 values discussed in the article to the 2015 values	2
Correctly calculate the supply shock in the beef market, $S_b^S = \frac{1.25-1.30}{1.30} = -3.80\%$	4
Correctly calculate the demand shock in the pork market, $S_p^D = \frac{2.98-2.93}{2.93} = 1.70\%$	4
Question 3	
Part (a)	
Recognized that you needed to solve for four elasticities, $\varepsilon^D_{Q_b,P_b},\ \varepsilon^S_{Q_b,P_b},\ \varepsilon^D_{Q_p,P_p},\ \varepsilon^S_{Q_p,P_p}$	1
Correctly solved for $\varepsilon^D_{Q_b,P_b} = -1.20$	2
Correctly solved for $\varepsilon^S_{Q_b,P_b} = 0.45$	1
Correctly solved for $\varepsilon^D_{Q_p,P_p} = -0.82$	2
Correctly solved for $\varepsilon^S_{Q_p,P_p} = 1.26$	1
Correct labels: P on vertical axis; Q on horizontal axis; Initial equilibrium quantity, Q_0; Initial equilibrium price, P_0	1
In beef market, demand slope is relatively shallow/flat; supply curve is relatively steep	2
In beef market, inward supply curve shift; new equilibrium values are correctly labeled	2
In beef market, described that $\Delta P < \Delta Q$	2
In pork market, demand slope is relatively steep; supply curve is relatively shallow/flat	2
In pork market, outward demand curve shift; new equilibrium values are correctly labeled	2
In pork market, described that $\Delta P < \Delta Q$	2

Task	Points
Part (b)	
Correctly set up the theoretical problem set up, $\%\Delta Q_b^S = \varepsilon^S_{Q_b,P_b}\%\Delta P_b + S_b^S$ $\%\Delta Q_b^D = \varepsilon^D_{Q_b,P_b}\%\Delta P_b + \varepsilon^D_{Q_b,P_p}\%\Delta P_p + S_b^D$ $\%\Delta Q_p^S = \varepsilon^S_{Q_p,P_p}\%\Delta P_p + S_p^S$ $\%\Delta Q_p^D = \varepsilon^D_{Q_p,P_p}\%\Delta P_p + \varepsilon^D_{Q_p,P_b}\%\Delta P_b + S_p^D$	8
Identified the need to solve for six elasticities, $\varepsilon^D_{Q_b,P_b}$, $\varepsilon^D_{Q_b,P_p}$, $\varepsilon^S_{Q_b,P_b}$, $\varepsilon^D_{Q_p,P_p}$, $\varepsilon^D_{Q_p,P_b}$, $\varepsilon^S_{Q_p,P_p}$	2
Using given price/quantity values, correctly solved for $Q_b = 1.30$	1
Correctly solved $\varepsilon^D_{Q_b,P_b} = -1.20$	1
Correctly solved $\varepsilon^D_{Q_b,P_p} = 0.71$	4
Correctly solved $\varepsilon^S_{Q_b,P_b} = 0.45$	1
Using given price/quantity values, correctly solved for $Q_p = 2.93$	1
Correctly solved $\varepsilon^D_{Q_p,P_p} = -0.82$	1
Correctly solved $\varepsilon^D_{Q_p,P_b} = 0.67$	4
Correctly solved $\varepsilon^S_{Q_p,P_p} = 1.26$	1
Correctly solved for $\%\Delta P_b = 0.47\%\Delta P_p + 2.30$	4
Correctly solved for $\%\Delta P_p = 0.32\%\Delta P_b + 0.82$	4
Substituted the formula for $\%\Delta P_p$ into function for $\%\Delta P_b$	1
Correctly solved for $\%\Delta P_b = 3.08\%$	3
Correctly solved for $\%\Delta P_p = 1.81\%$	3
Correctly solved for $\%\Delta Q_b = -2.41\%$	3
Correctly solved for $\%\Delta Q_p = 2.28\%$	3