Micro

Answers to Elasticity Exercises 2

1) It means that quantity demanded is relatively responsive to a change in the price of that product. Specifically, it means that a 1 percent change in price will lead to a greater than 1 percent change in quantity demanded.

2) The presence of close substitutes: If there are close substitutes for a good, even a small increase in the price of that good will drive people to buy these substitutes that provide the same services, but whose price has not changed. Longer time horizon: The longer we have to react to a change in price, the more adjustments we are capable of making. Low proportion of income spent on the good: If a good can be purchased with "pocket change," significant percentage increases in the price of a product may not lead consumers to reduce consumption. As the cost of a good becomes large relative to one's income, however, even small percentage changes in its price made lead us to make significant reductions in the quantity we demand.

3) \[ \eta = \frac{(3 - 1)}{(2.5 - 5)} \bullet \frac{(5 + 2.5)}{(1 + 3)} = -1.5 \]

Yes, the price elasticity of demand is greater than 1. (Remember, we ignore the sign for price elasticities of demand.)

4) As Smith's income rose, he consumed less haggis. Therefore, you could say that it was an inferior good; its income elasticity of demand was negative. (Of course it's also possible that he ate less haggis because he and the Duke's son went on a grand tour of Continental Europe, including France, where haggis is not commonly found on the menu.)

5) It means that the quantity supplied is relatively unresponsive to changes in the price of the product. You would probably see a relatively steep supply curve. We know that the shape of the supply curve depends on how the producer's marginal costs behave. If the curve is inelastic, it indicates that the cost of producing another unit of the good is rising rapidly as output increases. Therefore, a large increase in price is needed to convince the producer to supply even a small amount of additional product.

6) The lawyers are trying to prove that Vienna sausages are substitutes for Spam. Remember that a monopoly only exists if there are no close substitutes for a product. As for their argument, yes, the cross-price elasticity of demand is positive. Therefore, Spam and Vienna sausages are substitutes. But it is pretty small. A 1% change in the price of Spam only produces a 0.05% change in the quantity of Vienna sausages.
demanded. This indicates that Spam and Vienna sausages are not very close substitutes. Thus it's not much of a defense against the monopoly charges. Also, since Hormel is a maker of Vienna sausages as well, it's probably an even weaker defense.

7) \[ \eta = \frac{(4 - 2)}{(2.5 - 5)} \cdot \frac{(5 + 2.5)}{(2 + 4)} = -1.0 \]

The elasticity of demand has fallen. The demand curve shifted outwards in a parallel fashion, thus slope did not change and prices remained the same, but quantities increased.

8) You tell him to crank that price up. Demand for this good is inelastic. A 1 percent increase in price will lead to a less than 1 percent decrease in quantity sold. That means your revenues will rise. Then tell your boss to get out of the stuffed toy business. Plastering Garfield on your windows interferes with visibility and causes traffic accidents.

9) Tax the gas. Neither tax will actually bring in $1,000 because people will reduce purchases of each as the price rises. Still, purchasers of gasoline are likely to cut back proportionately less than purchasers of Coke. It’s hard to run your car on anything other than gas, while it’s easy to switch to Pepsi or RC. Simply put, the price elasticity of demand for gas is lower than it is for Coke. (Then again, technology is changing. Maybe we’ll all be able to install a Mr. Fusion on our Deloreans one day.)