1 Graded Questions

1. Consider the market for gasoline in the U.S.
   (a) State the formula for the own-price elasticity of demand.
   (b) What factors influence the elasticity of demand? Do you expect that demand for gasoline is more or less elastic than for peanut butter?
   (c) Suppose that the city of Charlottesville imposes a special tax on gasoline that raises the price by 5%. To avoid paying the tax, many Charlottesville residents choose to buy their gasoline in Albemarle County, which does not tax gas, and the quantity of gasoline sold in Charlottesville falls substantially. What does this suggest about the elasticity of demand *in Charlottesville*?
   (d) Based on your answer to part (c), which will be more elastic: the demand for gasoline in Charlottesville, or in all of Virginia? Why?
   (e) Suppose that you estimate a price elasticity of demand using data on gasoline sales during the first week after the tax compared with the week prior. You then re-estimate the elasticity using data for the entire year after the tax compared with the year before. Which elasticity – the short-run, based on two weeks of data, or the long-run, based on two years – do you expect to be larger in magnitude? Why?
2. The energy crisis in Europe has led to calls for restrictions on energy consumption.
   (a) Draw a supply and demand graph depicting the market for electricity.
   (b) Suppose that demand rises during the winter and at the same time Russia stops exporting fuel to the EU, so the supply of electricity falls. What can you say about the ultimate effect on prices? On the quantity of electricity that is consumed?
   (c) Draw another supply and demand graph of the electricity market. Now suppose that the U.K. imposes a binding price ceiling on electricity of 0.25£ per kilowatt-hour. Draw this ceiling on your graph and identify the magnitude of the resulting shortage or surplus.
3. What are the three fundamental questions that every society must answer?
4. Consider the market for Rice Krispies cereal.
   (a) List three factors that can shift demand for Rice Krispies cereal.
   (b) Is the elasticity of demand larger in magnitude for Rice Krispies alone or for all breakfast cereals combined? Why?
   (c) Suppose that a rival cereal company introduces a competitor to Rice Krispies called "Rice Crispees" that everyone believes tastes the same as the original. What effect will this have on the elasticity of demand for Rice Krispies?
   (d) How would you calculate the cross-price elasticity of Rice Krispies with respect to milk? If milk and Rice Krispies are complements, will the cross-price elasticity be positive or negative?
   (e) If Rice Krispies were to violate the Law of Demand, will the own-price elasticity be positive or negative?