| ECO 610        | Name: |
|----------------|-------|
| Fall 2017      | rume. |
| Problem Set #2 |       |
|                |       |

- 1. (12 pts.) After taking trips to centrally planned economies in Cuba and North Korea, Lexington's mayor notices how thin each country's citizens seem to be. He convinces city council to try to improve social well-being in Lexington by combating obesity and reducing the caloric intake of its citizens. A citywide tax on carbonated soft drinks sweetened with sugar is implemented, raising the price of (for example) name-brand beverages like Coke and Pepsi from \$4 to \$5 for a 12-pack of 12 oz. cans. Grocery stores and other sellers experience a 35% decline in sales.
  - a) Calculate own-price elasticity of demand for sugary soft drinks. Show your work.

b) The cross-price elasticity of demand between sugary and diet soft drinks is 0.7. How much extra shelf-space will be allocated to diet carbonated beverages in grocery stores after the sugar tax is imposed? Explain how you get your answer.

c) The income elasticity of demand for sugary soft drinks is -0.2. Will this tax fall more heavily on low-income or high-income households? Briefly explain.