

3. In the local market for Good X, there are four individual buyers: Emily, Wu, Omar, and Fernanda. The quantities that each individual buyer would be willing and able to purchase at different prices are included in the table provided.

| Price | Quantity of Good X |    |      |          |
|-------|--------------------|----|------|----------|
|       | Emily              | Wu | Omar | Fernanda |
| \$1   | 5                  | 4  | 4    | 3        |
| \$2   | 4                  | 3  | 4    | 3        |
| \$3   | 4                  | 3  | 3    | 2        |
| \$4   | 3                  | 2  | 3    | 2        |
| \$5   | 3                  | 2  | 2    | 1        |
| \$6   | 2                  | 1  | 2    | 1        |
| \$7   | 2                  | 1  | 1    | 0        |
| \$8   | 1                  | 0  | 1    | 0        |

- (a) The local market for Good X has a perfectly elastic supply. Draw a correctly labeled graph for the local market for Good X with a market equilibrium price of \$5. Label the equilibrium price as \$5, and label the equilibrium quantity for the market with a specific value based on the data provided in the table.
- (b) Assume the cost of production increases, which causes the price of Good X to increase from \$5 to \$7.
- (i) Calculate the price elasticity of demand for Good X as the price increases from \$5 to \$7. Show your work.
- (ii) Identify whether the demand for Good X is elastic, inelastic, or unit elastic in that range of prices.
- (c) Could Emily's marginal benefit for the second unit of Good X equal \$4.50 ? Explain.

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

**STOP**

**END OF EXAM**