

Question 1 will receive twice as much weight as question 2 in determining that grade on the problem set. (For clarity: question 1 determines 10 per cent of the course grade, question 2 determines 5 per cent of the course grade.)

1.

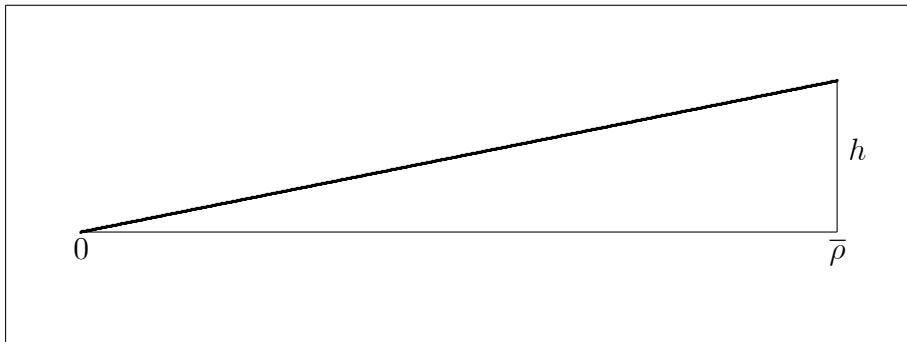


Figure 1: Triangular distribution of consumers' reservation prices.

The reservation prices of N consumers for a good are distributed over the range $0 \leq \rho \leq \bar{\rho}$ according to the triangle density function shown in the figure.

The height of the triangle on its right side is h .

A consumer will buy 1 unit of the good if the consumer's reservation price $\rho \geq p$, where p is price.

Find the market demand and inverse demand equations.

Find the price elasticity of demand and the marginal revenue equation.

Show the derivations of your answers. Correct answers without derivations will not receive credit.

2. Based on the material in the Agriculture chapter in *The Structure of American Industry*, answer the following questions:

(a) in what ways are U.S. agricultural markets similar to the economic model of a perfectly competitive market?

(b) in what ways are U.S. agricultural markets different from the economic model of a perfectly competitive market?