

HW#7 Due Feb 15, 2022

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$$\eta_p = 0.1, 0.7$$

3. Suppose the price elasticity of demand for heating oil is 0.2 in the short run and 0.7 in the long run.
- a. If the price of heating oil rises from \$1.80 to \$2.20 per gallon, what happens to the quantity of heating oil demanded in the short run? In the long run? (Use the midpoint method in your calculations.)
  - b. Why might this elasticity depend on the time horizon?

7. Suppose that your demand schedule for pizza is as follows:

Price	Quantity Demanded (income = \$20,000)	Quantity Demanded (income = \$24,000)
\$8	40 pizzas	50 pizzas
10	32	45
12	24	30
14	16	20
16	8	12

- a. Use the midpoint method to calculate your price elasticity of demand as the price of pizza increases from \$8 to \$10 if (i) your income is \$20,000 and (ii) your income is \$24,000.
- b. Calculate your income elasticity of demand as your income increases from \$20,000 to \$24,000 if (i) the price is \$12 and (ii) the price is \$16.

