

Chapter 5 Problem Sets

Elasticity

1) PS05 \\ Elasticity Problems \\ 1 \\

Compute the elasticities for the following problems.

- _____ 1. The Hobbit family buys 72 vegetarian specials annually at a price of \$3.00 each but would consume 192 per year if the price dropped to \$2.40. Their price elasticity of demand is ?
- _____ 2. The Sea Slug Glee Club bought 170 motor scooters when the price was \$875 each, but ordered only 30 when the price soared to \$2,125. The group's price elasticity of demand for scooters is ___?
- _____ 3. If diet faddists gulp 205 million unsweetened "No-Carb" milkshakes at \$2.30 apiece, but cut back to 155 million weekly when the price rises to \$3.70 each, the price elasticity of their demand for shakes equals ___?
- _____ 4. If a \$9.98 sale on regular \$19.95 watch fobs raises a store's sales from 30 to 300 per week, the price elasticity of the demand faced by the store is roughly ___?
- _____ 5. If a strong recovery raises national income from \$12.0 trillion to \$13.2 trillion and diamond sales jump from 3 to 13 million carats annually, the income elasticity of demand for diamonds is ___?
- _____ 6. If each 1% hike in the price of pencils causes a 2% decline in the quantity of erasers sold, the price cross-elasticity of demand for these complementary goods is roughly?
- _____ 7. When John Whittler can sell totem poles for \$1,800 each, he markets 60 annually, but when the price falls to \$600 apiece, he is willing to sell only 24 each year. His price elasticity of supply is ___?
- _____ 8. When the temperature drops from 102° F to 54° F, sales of surf boards slip from 56,000 monthly down to 14,000 for diehard surfers. The temperature elasticity of the demand for surf boards is ___?
- _____ 9. When 200,000 gallons of water are applied per acre, 4 tons are harvested from each acre of linguini trees annually, but cutting back to 160,000 gallons causes the crop per acre to fall to 2 tons annually. The water elasticity of linguini production is ___?
- _____ 10. If doubling your viewing of soap operas to 16 hours per week causes your IQ score to fall from a genius level of 140 to a sluggish 70, your TV elasticity of brain power is ___?