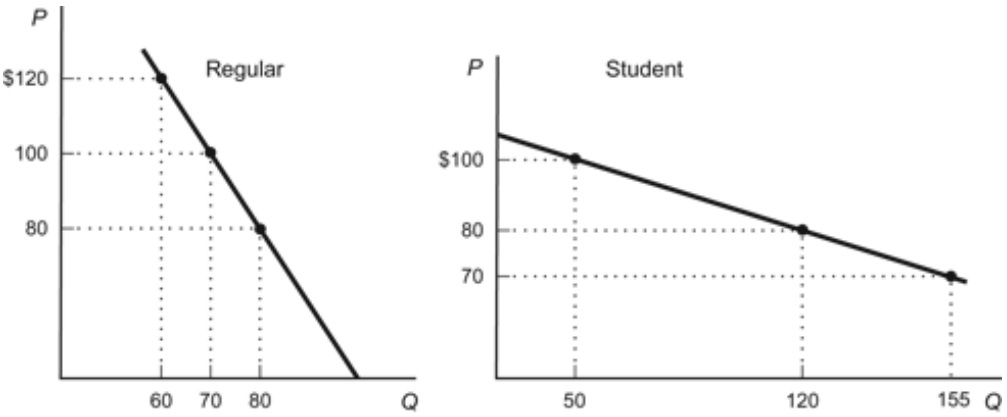
1. Figure: iPod Consumers



A local electronics store sells iPods for $100 per unit. The manager who took a lesson from his economics course in college decides to offer a 20% discount to students who can present their current student ID at purchase. Given the demand curves for regular and student customers, answer the following questions.

a. What will be the total revenue for both groups of customers if the store offers the discount?
b. For which group of customers is the demand more elastic?
c. What is the elasticity of demand between the prices of $100 and $80 in the regular market?
d. What is the elasticity of demand between the prices of $100 and $80 in the student market?
e. If the manager increases the regular price of iPods to $120 and lowers the discount price to $70, how much could the store increase total revenues?

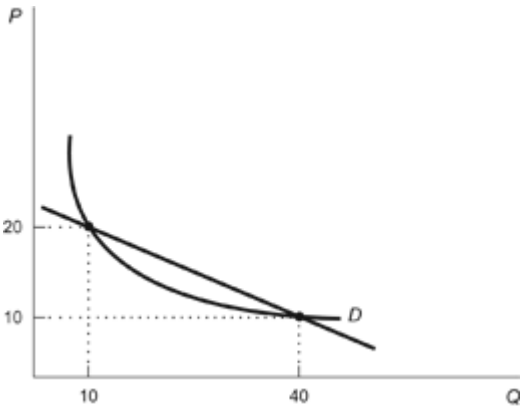
2. Consider a market that is described by the equations $Q_d = 10 - 0.5P$, and $Q_s = -2 + 1.5P$. What is the equilibrium price? What is the equilibrium quantity? If the demand curve shifts and the new demand equation is $8 - 0.5P$, what are the new equilibrium price and the new equilibrium quantity? Calculate the price elasticity of supply. Is the supply curve between price 1 and price 2 inelastic or elastic?

3. Table: Price Elasticities

	Good X	**Good Y**
Price elasticity of demand	0.5	1
Price elasticity of supply	1	0.5

Use the information provided to predict the following:
a. the percentage change in price (*P*) when there is a 2% rise in demand for good X
b. the percentage change in price (*P*) when there is a 5% fall in demand for good Y
c. The percentage change in price (*P*) when there is a 5% fall in supply of good X.

4. Figure: Elasticity of Swim Trunks



The demand for swim trunks appears in the figure. What is the elasticity of demand for swim trunks? Suppose that your swimwear business is currently overstocked with swim trunks. If you want to sell 18% more swim trunks, how much should you cut your price?

5. The demand curves for good A and good B are given by $Q_a = 100 - P_a$ and $Q_b = 50 - 0.2P_b$, where Q_a is the quantity demanded of good A, P_a is the price of good A, Q_b is the quantity demanded of good B, and P_b is the price of good B.

a. Graph the demand curve for both goods.
b. Which demand curve is more elastic?
c. If the price of both goods increases from $50 to $60, what happens to total revenue in each market?
d. Use the midpoint formula to calculate the elasticity of demand for both goods resulting from the price change in part c.
e. What do your elasticity of demand calculations in part d tell you about the elasticity of demand for goods A and B?

6. Consider a market that is described by the equations $Q_d = 10 - 0.5P$, and $Q_s = -2 + 1.5P$. What is the equilibrium price? What is the equilibrium quantity? If the supply curve shifts and the new supply equation is $-4 + 1.5P$, what are the new equilibrium price and the new equilibrium quantity? Calculate the price elasticity of demand. Is the demand curve between price 1 and price 2 inelastic or elastic?