1. Currently, at a price of $1 each, 100 popsicles are sold per day in the perpetually hot town of Rostin. Consider the elasticity of supply. In the short run, a price increase from $1 to $2 is unit-elastic (Es=1.0). So how many popsicles will be sold each day in the short run if the price rises to $2 each? In the long run, if the price rises to $2 each? (Hint: Apply the midpoint approach to the elasticity of supply).
2. Assume the following values for Figures 5.4a and 5.4b. Q1=20 bags, Q2=15 bags, Q3=27 bags. The market equilibrium price is $45 per bag. The price at *a* is $85 per bag. The price at c is $5 per bag. The price at f is $59 per bag. The price at g is $31 per bag. Apply the formula for the area of a triangle (Area = 1/2 x Base x Height) to answer the following questions.
3. What is the dollar value of the total surplus (producer surplus plus consumer surplus) when the allocatively efficient output level is being produced? How large is the dollar value of the consumer surplus at that output level?
4. What is the dollar value of the deadweight loss when output level Q2 is being produced? What is the total surplus when output level Q2 is being produced?
5. What is the dollar value of the deadweight loss when output level Q3 is produced? What is the dollar value of the total surplus when output level Q3 is produced?
6. Let MUA = z = 10 - x and MUB = z = 21 - 2y, where z is marginal utility per dollar measured in units, x is the amount spent on product A, and y is the amount spent on product B. Assume that the consumer has $10 to spend on A and B - that is, x+y = 10. How is the $10 best allocated between A and B? How much utility will the marginal dollar yield?