Homework

Chapter 3 Pricing Data Smartly

1. (10 points) Consider four users: Anna, Ben, Charlie, and Dana. In the next month, they will consume 10, 20, 30, and 40 GB, respectively. Now, suppose the ISP has decided that the congestion cost is $8/GB. If the ISP wants to recover its cost, what will it charge each user (in dollars) under a purely flat-rate scheme? How about a purely usage-based scheme?

2. (10 points) Suppose a user's data demand curve is described in the following graph. The ISP has determined that the congestion cost is $10/GB; at that price, the user's demand is 10 GB each month. At a price of $0/GB, the user would consume 15 GB each month, and at a price of $30/GB, the user would not consume anything. What is the surplus under usage-based pricing (in dollars)? How about flat-rate pricing?