Activity Week 3: Questions of the day

These questions are about
Off-line Homework 2.1 page 3
**WebAssign Section 2.1#8 Parts (a), (b) and (c)**

Your professor has possibly not lectured over 2.1 yet, but that's OK because Off-line Homework 2.1#8 (a), (b) and (c) all come from the Lecture Notes over Sections 1.1/1.2/1.3.

**Vocabulary:** The demand $q(x)$ is the number of units of a commodity that consumers will purchase at the per-unit price $x$.

- Read the following from Lecture Notes 1.1/1.2/1.3:
  - 1.3 Example 3 (page 5)
  - The definitions from Lecture Notes 1.2 (page 3)
- Do Off-line Homework 2.1#8 Parts (a), (b) and (c).
- Check your understanding:
  - How many logons do you get per month if you don't charge?
  - What is the price beyond which no one is willing to pay to logon?
Copy this problem on the back of your 2.1 Off-line Homework.

**Activity Week 3: Problem of the Day**
Reference: Lecture Notes 1.3 Example 3 (page 5), and Lecture Notes 1.2 Definitions (page 3).

This is ebook 2.1 #29.
In 2005, the Las Vegas monorail charged $3 per ride and had an average ridership of 28,000 per day. In December 2005, the Las Vegas Monorail Company raised the fare to $5 per ride, average ridership plunged to around 19,000 per day.

a. Assuming the demand is linear, find a formula for the daily demand \( q(x) \) in terms of the price \( x \) per ride.

b. How many riders should they expect if they raise the price to $6 per ride?

b'. How many riders should they expect if they raise the price to $10 per ride?

c. Use your demand function to find a formula for the total daily revenue in terms of the price per ride \( x \).