1. Cost and revenue functions for a charter bus company are shown in the figure above. Should the company add a 50th bus? How about a 90th? Explain your answers using marginal revenue and marginal cost.

2. A company’s cost of producing \( q \) liters of a chemical is \( C(q) \) dollars; this quantity can be sold for \( R(q) \) dollars. Suppose \( C(2000) = 5930 \) and \( R(2000) = 7780 \).

   (a) What is the profit at a production level of 2000?

   (b) If \( MC(2000) = 2.1 \) and \( MR(2000) = 2.5 \), what is the approximate change in profit if \( q \) is increased from 2000 to 2001? Should the company increase or decrease production from \( q = 2000 \)?

   (c) If \( MC(2000) = 4.77 \) and \( MR(2000) = 4.32 \), should the company increase or decrease production from \( q = 2000 \)?