1. (3 pts. each) Let \( f(x) = x^2 + 2x \).

(a) Use increments to estimate by how much the function \( f(x) \) will change when \( x \) decreases from 4 to 3.5.

(b) Find the exact change in the function \( f(x) \) as \( x \) decreases from 4 to 3.5.

2. (3 pts. each) A manufacturer’s total monthly revenue in dollars generated by producing \( q \) units of a certain product is \( R(q) = 300q - 3q^2 \).

(a) Use marginal analysis to estimate the additional revenue the manufacturer will receive by producing the 21st unit.

(b) Find the actual additional revenue generated by producing the 21st unit.