Quiz 1

Suppose the total benefit derived from a given decision, \( Q \), is \( B(Q) = 100 + 36Q - 4Q^2 \) and the corresponding total cost is \( C(Q) = 80 + 12Q \), so that \( MB(Q) = 36 - 8Q \) and \( MC(Q) = 12 \).

a. What is total benefit when \( Q = 1 \)?
d. Write out the equation for the net benefits.
f. Write out the equation for the marginal net benefits?
h. What level of \( Q \) maximizes net benefit?
i. At the value of \( Q \) that maximized net benefits, what is the maximum value of net benefits?