Name: .... ID: ....

Quiz 3:

1. A monopolist with two products faces with the following demand and cost functions:

$$Q_1 = 40 - 2P_1 - P_2,\ Q_2 = 35 - P_1 - P_2, C = Q_1^2 + 2Q_2^2 + 10$$

a) Find the output levels that satisfy the first-order condition for maximum profit. (Use fractions rather than decimals.)

b) Check the second-order sufficient condition. Can you conclude that this problem possesses a unique maximum?