

ECOMATH V24 Group Quiz 04

Name _____

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1. A firm produces $Q = \ln(L + 1)$ units of a commodity when the labor input is L units. The price obtained per unit is 1 and price per unit of labor is $w > 0$. Assume further what $w < 1$.

(a) (1 point) Write down the profit function.

(b) (1 point) What choice of labor input $L = L^*$ maximizes profits?

(c) (1 point) L^* is a function that depends on a parameter. What is that parameter?

(d) (1 point) Assuming that $L = L^*$ is the maximizer, write down the optimal profits.

(e) (1 point) Verify the envelope theorem in this case.