Econ 301 Discussion - 10/13/2023

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Content Review

- Profit maximization

- Production functions

- Isoquants and Marginal Analysis

- Returns to scale

Practice Questions

1. Firm A is a price taker in a competitive market, and has cost function $c(q) = q^2$. Market price is $p = 2$. What is Firm A's marginal cost? What is their marginal revenue? What is the profit maximizing quantity?

2. Firm B has production function $F(K, L) = K^{\frac{1}{2}} L^{\frac{1}{3}}$. What is the marginal product of labor (MPL)? Is F increasing, decreasing or constant returns to scale?

3. Firm B has production function $F(K, L) = K^{\frac{1}{2}} L^{\frac{1}{3}}$. What is the marginal rate of technical substitution $MRTS_{KL}$ at $(K, L) = (3, 2)$?

4. Firm C only has one input to production, capital K. Their production function is $F(K) = max\{1, \sqrt{K} - 1\}$. What is the marginal product of capital? For what values of K is F CRS, DRS or IRS?