Econ 301 Discussion - 10/20/2023

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Content Review

- Cost function and isocosts

- Cost minimization problem

- Supply curve and elasticity of supply

Practice Questions

1. The cost of capital to Firm A is r = 100 and the cost of labor is w = 25. What is the firm's isocost function $C(K, L)$? Suppose their production function is $F(K, L) = 5K + L$. Should the firm use capital or labor?

2. Firm B's production function is $F(K, L) = min\{3K, L\}$. Input prices are $r = 6$ and $w = 5$. What is B's cost function $c(q)$? If the firm is producing in a competitive market, what must the price be?

3. In a competitive market, Firm C has cost curve $c(q) = 4q^2$. What is their supply curve? What is the elasticity of supply?

4. Firm C has production function $F(K, L) = K^{\frac{1}{4}}L^{\frac{1}{4}}$. They face input prices $r = 4$, $w = 1$. What is their cost curve $c(q)$? (Hint: You can solve the problem directly with substitution or solve for the MRTS and set it equal to the slope of the isocost curve.)