(a) Illustrate how the shape of the production function is related to the shape of the total cost curve.

(b) Draw a production function. Illustrate on this production function how you could illustrate the impact of technological progress.

(1) Production functions

Due

Name: Kyle

Professor John McPeek
PPV897
Problem Set #4
c. Provide values for a possible set of marginal products for capital and labor that meet the last-dollar rule.

\[
\frac{MPK}{MP_L} = \frac{2}{1} = \text{impractical}
\]

\[20 \text{ values could be}
\]

b. Write down an equation for the economic efficiency margin at the point of the last dollar.

\[
\frac{x}{y} = \frac{1}{5} \quad \text{so that} \quad 5x = y
\]

a. Draw an isoquant curve for a cost level of 100.

\[
C = 25K + 4L
\]

Assume the rental rate of capital is 2, and the wage rate is 4.
The market is supplied by a monopolist.

b) Illustrate the areas corresponding to consumer surplus, producer surplus, and deadweight loss if a competitive market.

3) Perfect Competition and Monopoly
4) A food stamp policy is put in place in a state. For our representative consumer illustrated by the indifference curves, illustrate on a graph using the budget lines from (a) and sample indifference curves a form of food stamps.

b. How would better off be?

4) Draw the original budget line and the budget line after the food stamp policy is implemented.