Unit 2
Producer Behavior (Ch. 6)
10/7

ECON 323 – MICROECONOMIC THEORY – DR. STRICKLAND

Returns to Scale

How much does output change if a firm increases its inputs by the same proportion?

- What is the firm's **returns to scale**?

Three types:

- Constant
- Increasing
- Decreasing

CD PROD. FCN:

$$q = K^a L^b$$

$a+b=1 \Rightarrow$ CONSTANT

$a+b>1 \Rightarrow$ INC.

$a+b<1 \Rightarrow$ DEC.

Technological Change

Often, output increases even when inputs do not change

- This is **total factor productivity growth**

$$q = \underline{A} f(K, L)$$

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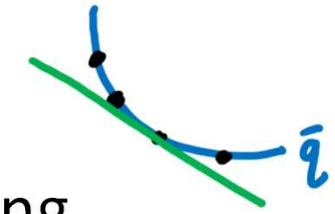
Suppose Dunder Mifflin employs 25 workers (w = \$10/hour) and 5 computers (r = \$20/hour). At these levels, the marginal product of labor (MP_L) is 25 and the marginal product of capital (MP_K) is 30. What should Dunder Mifflin do to minimize its costs of production?



$\frac{MP_L}{w}$ vs. $\frac{MP_K}{r}$

$\frac{25}{10}$ vs. $\frac{30}{20}$

2.5 vs. 1.5

A. Nothing – it is cost minimizing
B. Reduce workers and computers
C. Increase workers and decrease computers
D. Decrease workers and increase computers