

IC #14 Key (4-17-09)

1. If a business firm has a corporate income tax rate of 35% and spends \$10,000 on a tax-deductible expense, what is the "after tax" cost of this expense?

- a. \$10,000 (-3)
- b. \$13,500 (-2)
- c. \$3,500 (-3)
- * d. \$6,500 (-0)
- e. \$10,350 (-3)

$$\begin{aligned} \hookrightarrow &= (1-t)C \\ &= (1-.35)(10,000) \\ &= 6,500 \end{aligned}$$

2. Assume a business firm expects in the long run to pay \$20 per machine hour of capital (= K) and \$10 per hour of labor (= L) employed. For which of the following conditions should the firm plan on using more capital and less labor in the long run?

- a. MC of production using K = MC of production using L (-2)
- * b. MP of K = 20 and MP of L = 5 (-0)
- c. MC of production using L = 1/2 x (the MC of production using K) (-2)
- d. The point of diminishing returns for K has not been reached yet (-2)
- e. When L is fixed in the long run (-3)

$$\uparrow K \text{ if } MC_K < MC_L$$

$$\Rightarrow \frac{P_K}{MP_K} < \frac{P_L}{MP_L}$$

$$\begin{aligned} b) \Rightarrow & \downarrow \\ & \frac{20}{20} < \frac{10}{5} \end{aligned}$$