Economics 110, Section 2 Due: Noon, October 26, 2006

Problems – Chapter 7: Distribution: Who Gets What?

Note: This Problem Set is short because it is due on Wednesday noon, October 25th:

Problems for Chapter 7, Distribution, Who Gets What?
Questions 1, 3, and 5 page 331-2.

Honors Option: 6, page 332.

For question 3, please determine if the workers' real wage equals the marginal productivity of labor in equilibrium.

Errata: On Table 7.2, page 304, the average difference figure in the lower right hand corner should be 21.5%.

Technical Point re the graphical representation of *profits* and *producer surplus*:

On Figure 6.10, page 256, profits were identified by the trapezoid p_m,a,e,d. Actually, this area is the "Producer Surplus", the seller's analog to consumer surplus that was briefly discussed on page 106 of the text.

Producer surplus equals profits plus fixed costs:

$$S_p = \pi + C(0)$$

For this graph fixed costs, C(0), are zero because the average total cost curve is linear, so in this instance the producer surplus does equal profits. In general, profits equal q×(p - Average Total Cost), which can be visualized as the area of the appropriate rectangle that could be drawn on the graph (see the little rectangle on Figure 5.11, page 216).

Consider the following area between p and the marginal revenue curve:

$$\int_0^Q [p - \frac{dC}{dq}]dq = R(Q) - C(Q) + C(0) = \pi + C(0) = R(Q) - [C(Q) - C(0)].$$

This area, which is the trapezoid p_m,a,e,d on Figure 6.10, page 256, is Producer Surplus. Also, Producer Surplus - C(0) = Profit.

All this means that the change on a graph in producer surplus, such as might result from a change in tax rates, provides a convenient graphical representation of the change in profits, given that C(0) is indeed unchanged.