SOLUCION EXAMEN MICRO II DICIEMBRE 2008-12-22

EJERCICIO 1 (24.3 Nicholson)

24.3 $AC = MC$ = 1000/well

a. Produce where revenue/well = 1000 = 10q = 5000 ! 10N. N = 400. There is an externality here because drilling another well reduces output in <u>all</u> wells.

b. Produce where $MVP = MC$ of well. Total value:

5000N ! 10N^2. MVP = 5000 ! 20N = 1000. N = 200.

Let tax = X. Want revenue/well ! X = 1000 when N = 200. At N = 200, average revenue/well = 3000.

charge X = 2000.

Ejercicio 2 (8.8 Nicholson)

8.8 a. A high value for 1 ! R implies a low elasticity of substitution between states of the world. A very risk-averse individual is not willing to make trades away from the certainty line except at very favorable terms.

b. R = 1 implies the individual is risk-neutral. The elasticity of substitution between wealth in various states of the world is infinite. Indifference curves are linear with slopes of !1. If R = !4, the individual has an infinite relative risk-aversion parameter. His or her indifference curves are L-shaped implying an unwillingness to trade away from the certainty line at any price.

c. A rise in P_b rotates the budget constraint counterclockwise about the W_g intercept. Both substitution and income effects cause W_b to fall. There is a substitution effect favoring an increase in W_g but an income effect favoring a decline. The substitution effect will be larger the larger is the elasticity of substitution between states (the smaller is the degree of risk-aversion).

EJERCICIO 3 (16.6 DE Nicholson)

16.6

a. $P_X/P_Y = 3/2$

b. If wage = 1, each person's income is 10. Smith spends 3 on *X*, 7 on *Y*. Jones spends 5 on *X*, 5 on *Y*.

Since $\frac{X}{2}+\frac{Y}{3}=20$, and demands are $X=\frac{8}{P_X}, Y=\frac{12}{P_Y}$

we have $\frac{8}{2P_X}+\frac{12}{3P_Y}=\frac{8}{2P_X}+\frac{12}{2P_X}=20,\text{or}$

$P_X = 2$, $P_Y = a$.

So Smith demands 6*X*, 21*Y*.

Jones demands 10*X*, 15*Y*.

c. Production is *X* = 16, *Y* = 36.

20 hours of labor are allocated:

8 to *X* production, 12 to *Y* production.