

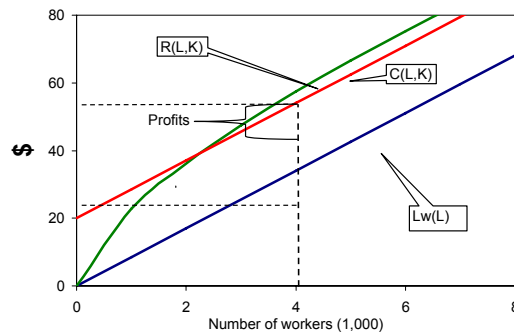
Question 3, Chapter 7, page 331.

Competition in the Labor and Product Markets simplifies Figure 7.6, page 313. Wage equation changed from $w = 3 - 0.7L$ to 5 and demand curve changed from $p = 20 - .3q$ to 20: i.e., competition in both the product and the labor market. Note that the Green line in the top panel is not as curved as much as before because it bends only because of the diminishing marginal productivity of labor now that w is constant. Also, because the wage rate is constant, the wage curve in the bottom panel is now horizontal and coincides with marginal labor cost.

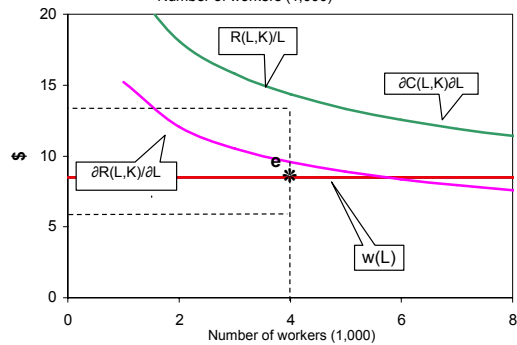
Competition in the labor and product market

	w0	L	w(L)	wL=LC	MLC	q	q/L	p	R(L)	R/L=ARP	dR/dL=MRP	Profit	rK	Total costs
w1	0	0	8.5	0	8.5	0.0		20.0	0.0			-20.0	20	20
a	20	1	8.5	9	8.5	1.1	1.1	20.0	22.8	22.8	15.2	-5.7	20	29
b		2	8.5	17	8.5	1.8	0.9	20.0	36.2	18.1	12.1	-0.8	20	37
lambda	0.67	3	8.5	26	8.5	2.4	0.8	20.0	47.4	15.8	10.5	1.9	20	46
alpha	1	4	8.5	34	8.5	2.9	0.7	20.0	57.5	14.4	9.6	3.5	20	54
K	5	5	8.5	43	8.5	3.3	0.7	20.0	66.7	13.3	8.9	4.2	20	63
r	4	6	8.5	51	8.5	3.8	0.6	20.0	75.3	12.5	8.4	4.3	20	71
Wmin	7.5	7	8.5	60	8.5	4.2	0.6	20.0	83.4	11.9	7.9	3.9	20	80
		8	8.5	68	8.5	4.6	0.6	20.0	91.2	11.4	7.6	3.2	20	88
		9	8.5	77	8.5	4.9	0.5	20.0	98.6	11.0	7.3	2.1	20	97
		10	8.5	85	8.5	5.3	0.5	20.0	105.8	10.6	7.1	0.8	20	105

Figure 7.6: Monopsony (p 313)



$R(L, K) \sim$ revenue
 $Lw(L) \sim$ total labor cost
 $C(L, K) \sim$ total costs



$w(L) \sim$ wage rate
 $\partial C(L,K)/\partial L \sim$ marginal labor cost
 $R(L,K)/L \sim$ average revenue per worker
 $\partial R(L,K)/\partial L \sim$ marginal revenue product of labor = $p \times dq/dL$
 = value of the marginal product because $dp/dq=0$

Question 7.5:

- a. A tax is said to be *progressive* if the T/Y ratio increases with income (page 327)

For this tax, $T/Y = -\$0/Y + .3$, which increases with income – its progressive

- b. $T = -40 + .3Y_{be} = 0$ at the break-even level of income. $0 = -40 + .3Y_b$ implies $40/.3 = \$133.33$ is the break-even level of income.

Question 7.1

Table 7.2: Income by quintiles in the United States, 2001

Average Income	% of Pop	% of total income	cumulative % of pop P	cumulative % of income L(P)	difference P-L(P)
1st 20%	10	20.0%	6.7%	20.0%	13.3%
2nd 20%	20	20.0%	13.3%	40.0%	20.0%
3rd 20%	30	20.0%	20.0%	60.0%	20.0%
4th 20%	40	20.0%	26.7%	80.0%	13.3%
5th 20%	50	20.0%	33.3%	100.0%	0.0%
Totals:	150	100.0%			66.7%

