

## Homework #2

The Americans with Disabilities Act (ADA) requires that institutions like Brooklyn College accommodate individuals with disabilities in such a manner that everyone will have equal access to all facilities. Issues of accessibility include physical entrances to buildings and classrooms as well as the technology that students use (e.g. computers must be fitted with audio output for students with visual impairments).

Some interpret the ADA to mean that the disabled have a civil right to full parity in access to resources. Others complain about the costs.

degree of parity	total benefit	total cost
0 %	0	0
10 %	36	39
20 %	64	67
30 %	85	86
40 %	100	98
50 %	110	105
60 %	116	109
70 %	119	112
80 %	120	116
90 %	120	123
100 %	120	135

1. Does the total benefit of parity exhibit diminishing marginal returns? Explain your answer.
2. When does the benefit of parity exceed the cost of parity?
3. To find Brooklyn College's optimal degree of parity, what condition should you look for?
4. What is Brooklyn College's optimal degree of parity?
5. In the context of this model, why shouldn't Brooklyn College strive for full parity?



You are given the following data on a profit-maximizing firm's production in the short-run (its capital stock is fixed).

The quantity of output that it produces (Q) depends on the amount of capital (K) and labor (L) it employs.

The firm must pay rent on its capital stock at a rate of about \$2 per unit, so its total rent bill is \$1000.

It also must pay a wage rate of \$5 per unit of labor.

Calculate the marginal product of labor for each output level. (NB: the marginal product of labor is the change in output per unit change in labor).

Q	K	L	MPL
309.02	500	73	--
310.08	500	74	
311.13	500	75	
312.17	500	76	
313.20	500	77	
314.22	500	78	
315.23	500	79	
316.23	500	80	
317.22	500	81	
318.20	500	82	

Up until what point does a profit-maximizing firm hire labor?

If the firm can sell all of its output on a perfectly competitive market at a price of \$5 per unit, then how much should it produce? How many units of labor should it employ?

Using your answers to the previous two questions, what will the firm's profit be?

Could it maintain this profit in the long-run? Why or why not?