

## Passed Solution Review

5. Consider a slight variation of the dynamic monopoly game analyzed in this chapter. Suppose there is only one high-type customer (Hal) and only one low-type customer (Laurie).

(a) Analyze this game and explain why  $p_2 = 200$  is not optimal if Hal does not purchase a monitor in period 1. Find the optimal pricing scheme for Tony. Discuss whether Tony would gain from being able to commit to not selling monitors in period 2.

	Period 1	Period 2	
Benefit to Hal	1200	500	$p_2 = 200$ is not optimal because it yields 400 while $p_2 = 500$ yields 500
Benefit to Laurie	500	200	If $p_1 = 1700$ , $p_2 = 200$ $p_{\text{total}} = 1900$

No way to make enough \$ off Hal in  $p_1$  to cover losses of not selling to Laurie

(b) Finally, analyze the game with one of each type of customer and ownership benefits given in the following figure. In this case, would Tony gain from being able to commit to not selling monitors in period 2?

	Period 1	Period 2
Benefit to Hal	1200	300
Benefit to Laurie	500	200

$$p_1 = 1500 \quad p_2 = 200$$

~~No way to make enough \$ off Hal in  $p_1$  to cover losses of not selling to Laurie~~

IF Hal doesn't buy @  $t=1 \rightarrow 300 < 200 + 200$  so  $p_2 = 200$

Hal buys @  $t=1$  if  $1500 - p_1 \geq 300 - 200 \Rightarrow p_1 \leq 1700$

$\pi = 1600$ . Tony would gain if he could commit to  $p_1 = p_2$