

Ricardo's Corn Model — You Drive

In-class worksheet · HL ch. 5, pp. 92–98 · Thursday, Oct 22 ·

Name _____

Example B

We did Example A together on the screen. This is Example B, same steps, new numbers. Work each part before I show the answer. Keep it: the quiz at the end of class has the same shape.

The farm. Five parcels. With one dose of capital and labor each, they yield this much corn (quarters). The subsistence wage of the labor on a parcel is **60 quarters**. Three parcels are in use, because that is how much corn the population needs.

Parcel	1	2	3	4	5
Total produce	130	120	100	90	75

Definitions. Net produce = produce – wages. It is the surplus, and it goes to rent or to farmer profit, nowhere else. Farmer profit = net produce – rent. Rate of profit r = farmer profit per parcel $\div$ wage.

B1. The static allocation: posted rents

A land agent has posted these rents: **35** on parcel 1, **15** on parcel 2, **10** on parcel 3. Fill in every cell, including the totals row.

Parcel	Produce	Wages	Net produce	Posted rent	Farmer profit
1	130	_____	_____	35	_____
2	120	_____	_____	15	_____
3	100	_____	_____	10	_____
Total	_____	_____	_____	_____	_____

Surplus = rent + farmer profit: _____ = _____ + _____.

B2. The rounds

Is B1 an equilibrium? Nobody will take parcel 3 at any positive rent while a better deal exists, and anyone keeping less than a neighbor will move or bid. Log each round: the rents, the three profits, and who still has a reason to move.

	Rent 1	Rent 2	Rent 3	Profit 1	Profit 2	Profit 3	Who moves next?
Start	35	15	10	_____	_____	_____	_____
Round 1	_____	_____	_____	_____	_____	_____	_____
Round 2	_____	_____	_____	_____	_____	_____	_____
Round 3	_____	_____	_____	_____	_____	_____	_____

The order of the rounds can differ from your neighbor's. The last row cannot.

B2 (continued). The equilibrium

Fill in the equilibrium rents and profits, then the totals.

Parcel	Produce	Wages	Net produce	Equilibrium rent	Farmer profit
1	130	60	70	_____	_____
2	120	60	60	_____	_____
3	100	60	40	_____	_____
Total	350	180	170	_____	_____

The marginal parcel is _____; its rent is _____; so every farmer's profit is _____, and $r =$ _____.

Compare with B1. What is the same, what changed, and who decided the split?

B3. Population grows

Parcel 4 (90) comes in, then 5 (75). Fill both rows at equilibrium; the last four columns are totals.

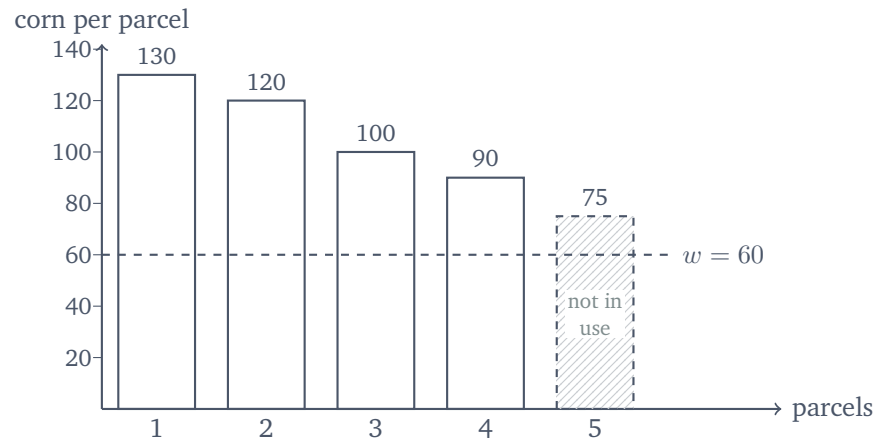
In use	Margin produce	Profit / parcel	r	Rent	Farmer profit	Wages	Surplus
4	_____	_____	_____	_____	_____	_____	_____
5	_____	_____	_____	_____	_____	_____	_____

From three parcels to five, the surplus grew by _____. Rent grew by _____. Farmer profit changed by _____. Cultivation stops when the next parcel produces _____.

Who took the farmers' profit? The landlords did nothing. In Ricardo's terms, why did profit fall?

B4. Draw it

The bars are the five parcels; **four are in use**. (a) Draw the line through the bar tops and label it P . (b) Mark the margin. (c) Shade and label **rent**, **profit**, and **wages**. (d) Write each total below.



Rent total: _____ Profit total: _____ Wages total: _____

B5. The Corn Laws

Foreign corn can now be imported at a cost equal to a parcel that produces **100**. (Population still needs five parcels' worth of corn.)

Parcels still farmed: _____. Rent on parcel 1: _____. Total rent: _____.

Profit per parcel: _____. $r =$ _____. Landlords lose, against the five-parcel world: _____.

Who votes to keep the Corn Laws, and what did Ricardo say about that class's interest?

B6. Before the quiz

In one sentence each, no numbers.

(1) What sets the rate of profit?

(2) What sets rent on a good parcel?

(3) Why does nobody "set" these numbers?
