Econ 308 - Exercise 4 (S09)
Construction of Demand & Supply Schedules

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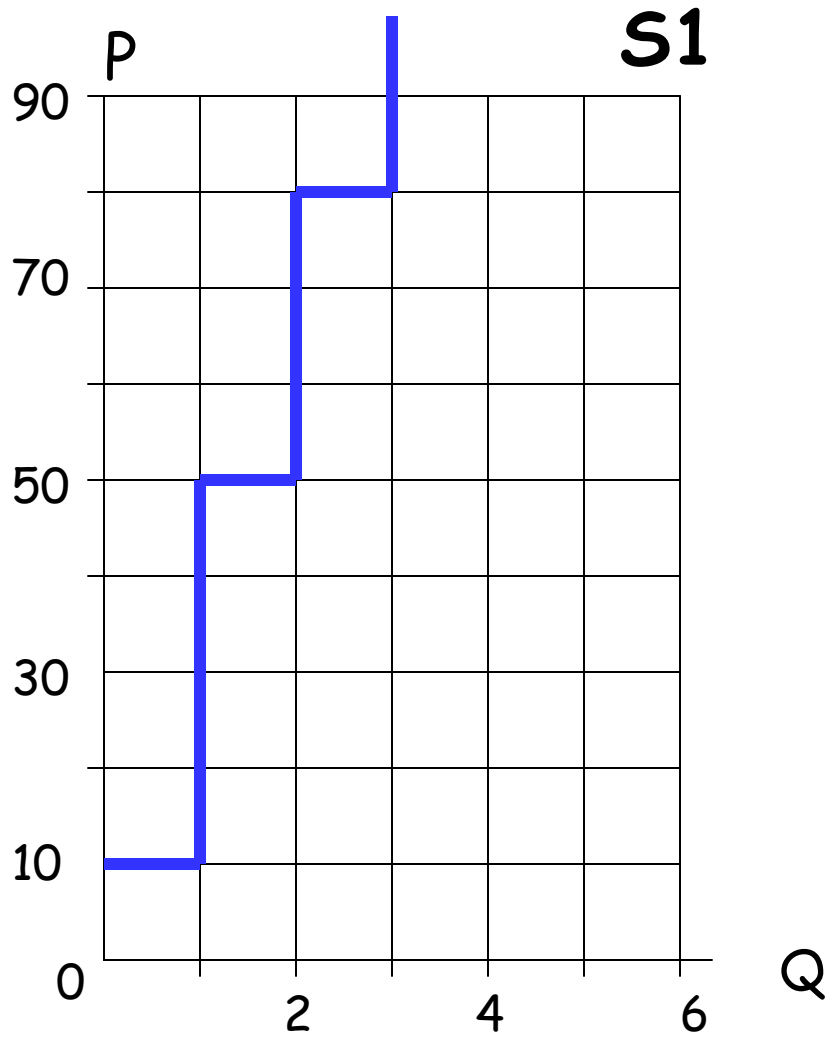
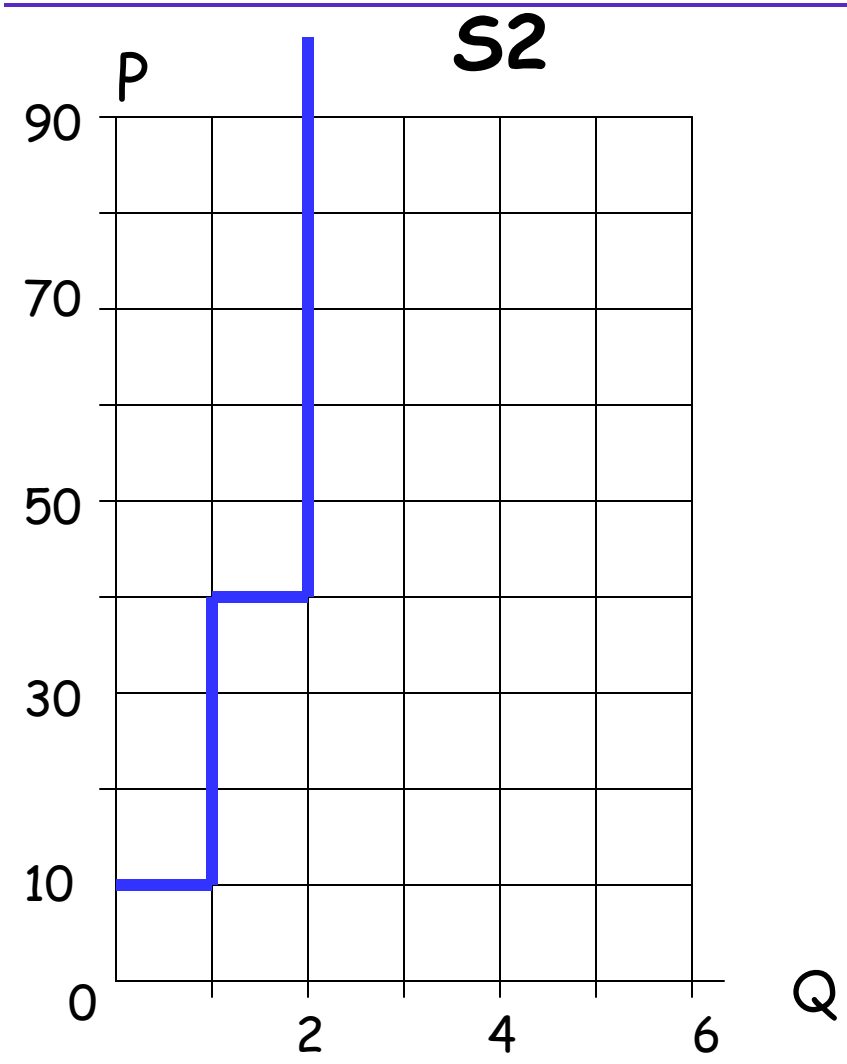
PART A: Seller 1 Supply Schedule S1



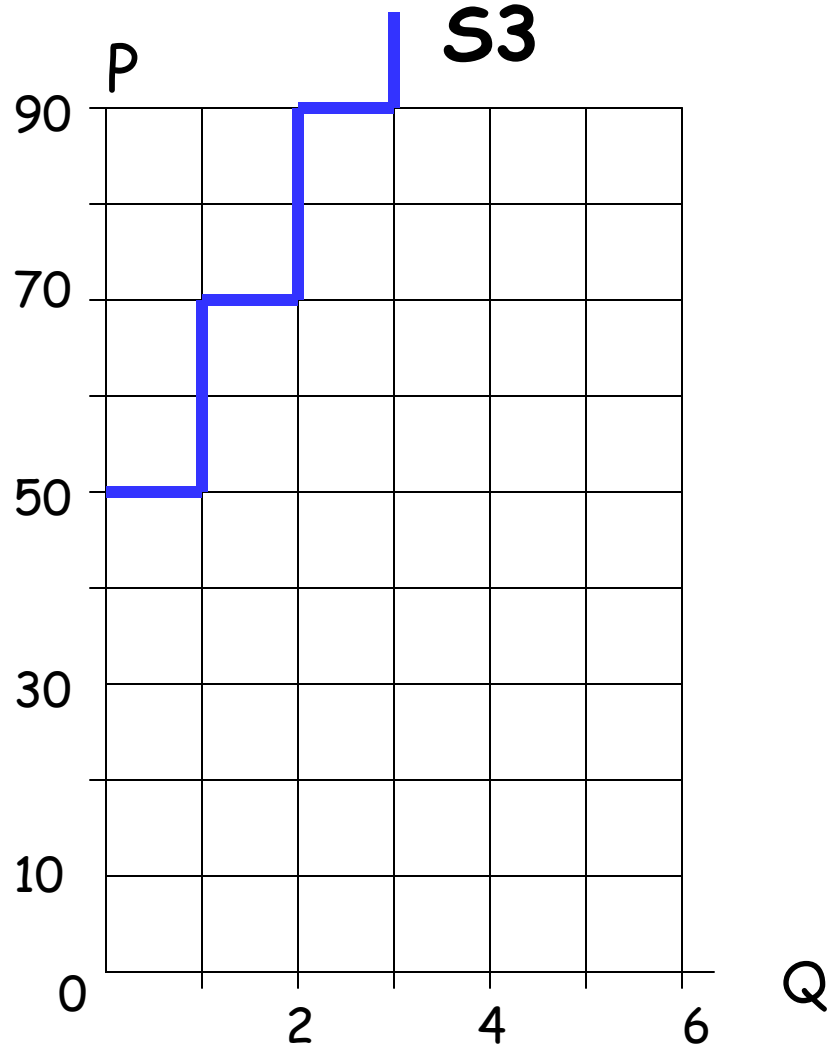
Bushel Unit	Seller 1 Price
1	$10
2	$50
3	$80
4	$∞
5	$∞
6	$∞
•	•
•	•
•	•

PART A: Seller 2 Supply Schedule S2



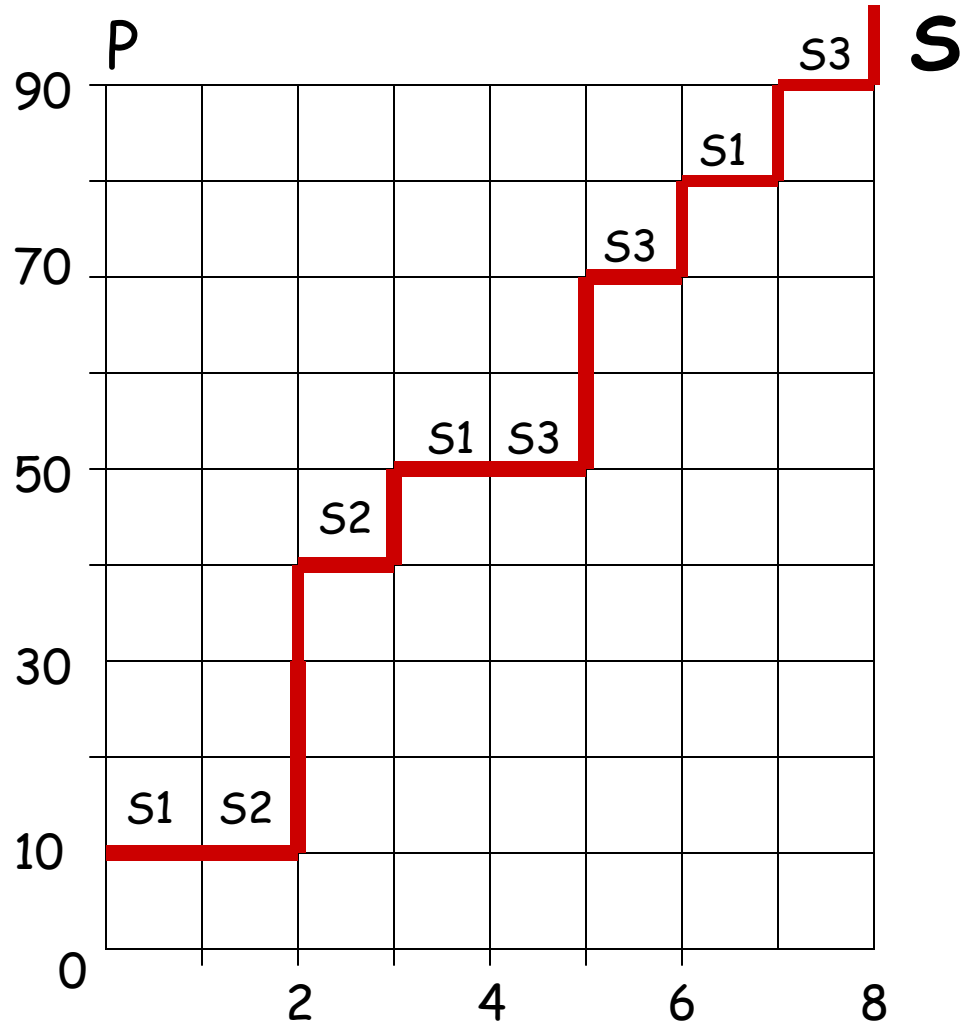
Bushel Unit	Seller 2 Price
1	$10
2	$40
3	$∞
4	$∞
•	•
•	•
•	•

PART A: Seller 3 Supply Schedule S3



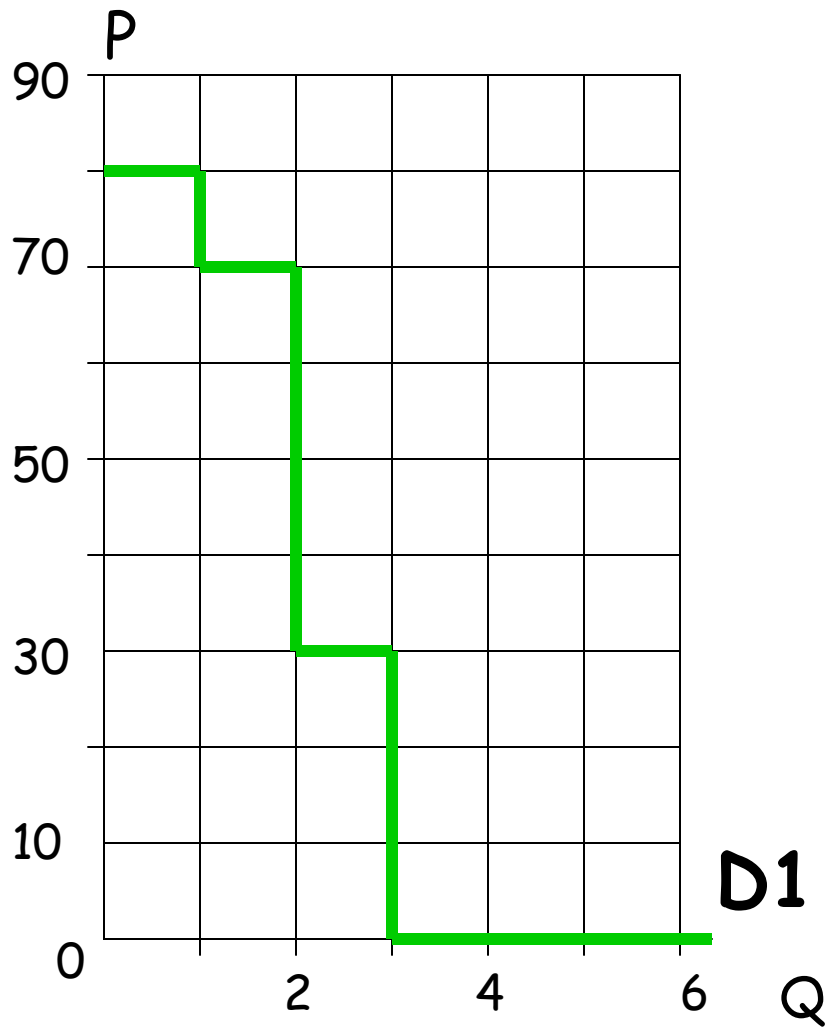
Bushel Unit	Seller 3 Price
1	$50
2	$70
3	$90
4	$∞
•	•
•	•
•	•

PART A: True Total Supply Schedule S



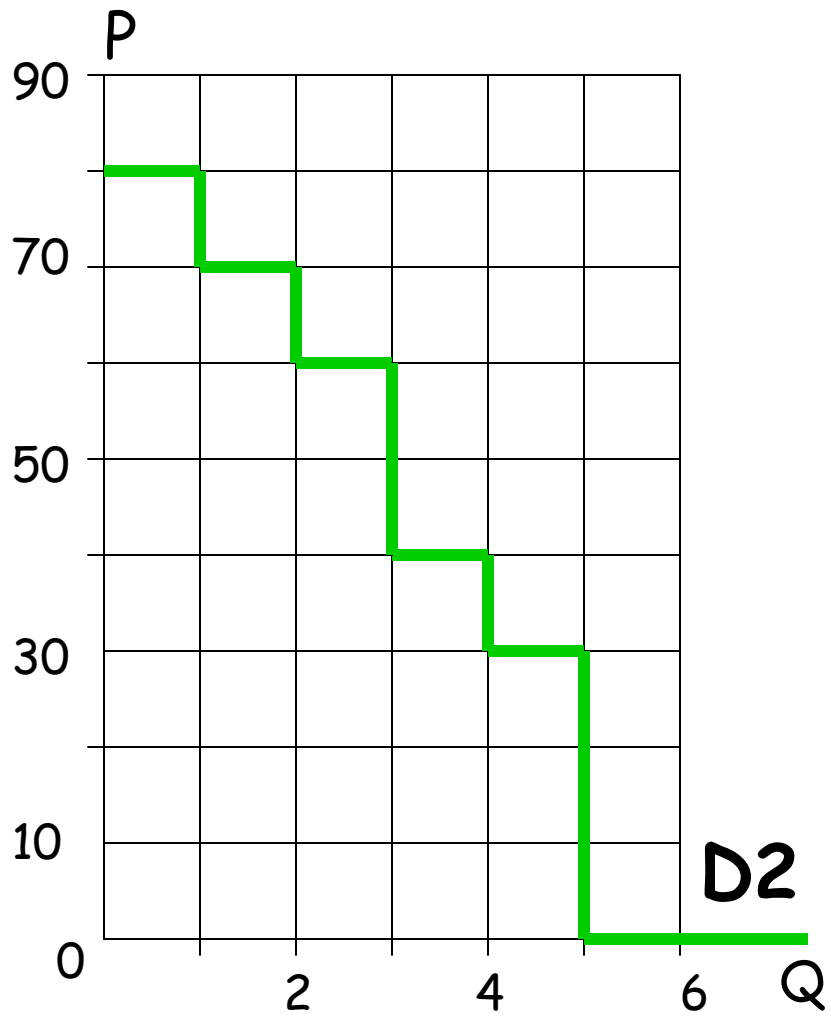
Bushel Unit	Min Seller Price
1	$10 (S1/S2)
2	$10 (S2/S1)
3	$40 (S2)
4	$50 (S1/S3)
5	$50 (S3/S1)
6	$70 (S3)
7	$80 (S1)
8	$90 (S3)
9	$∞
•	•
•	•
•	•

PART B: Buyer 1 Demand Schedule D1



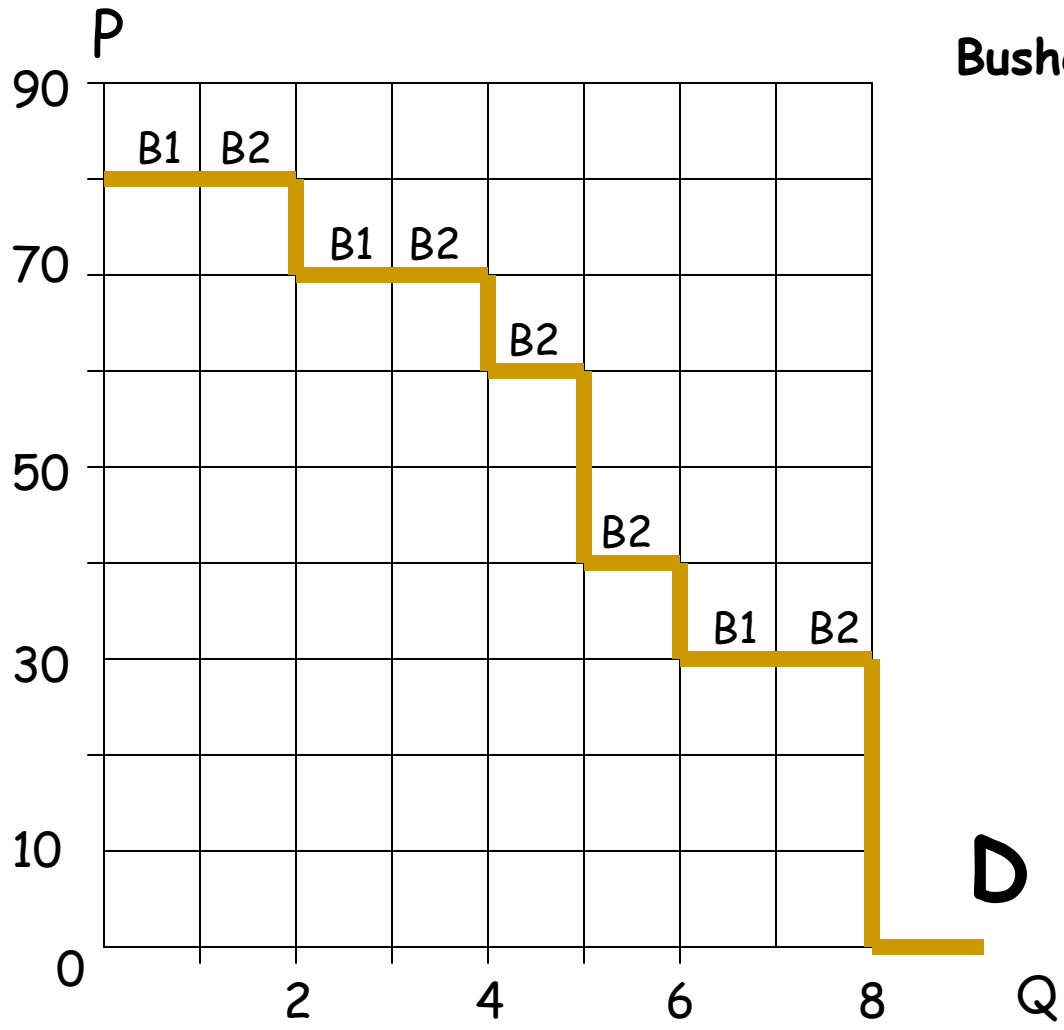
Bushel Unit	Buyer 1 Price
1	$80
2	$70
3	$30
4	$ 0
•	•
•	•
•	•

PART B: Buyer 2 Demand Schedule D2



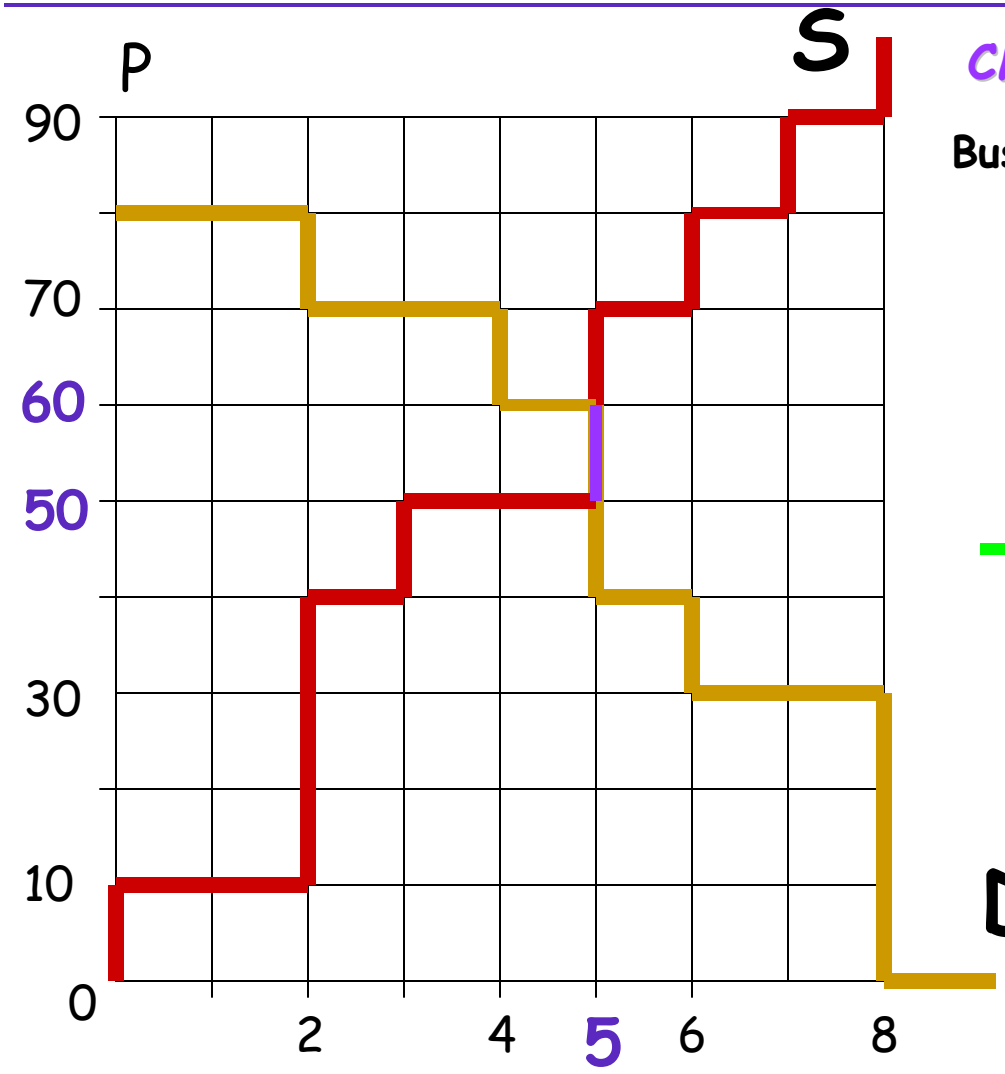
Bushel Unit	Buyer 2 Price
1	$80
2	$70
3	$60
4	$40
5	$30
6	$ 0
•	•
•	•
•	•

PART B: True Total Demand Schedule D



Bushel Unit	Max Buyer Price
1	$80 (B1/B2)
2	$80 (B2/B1)
3	$70 (B2/B1)
4	$70 (B1/B2)
5	$60 (B2)
6	$40 (B2)
7	$30 (B1/B2)
8	$30 (B2/B1)
9	$0
•	•
•	•
•	•

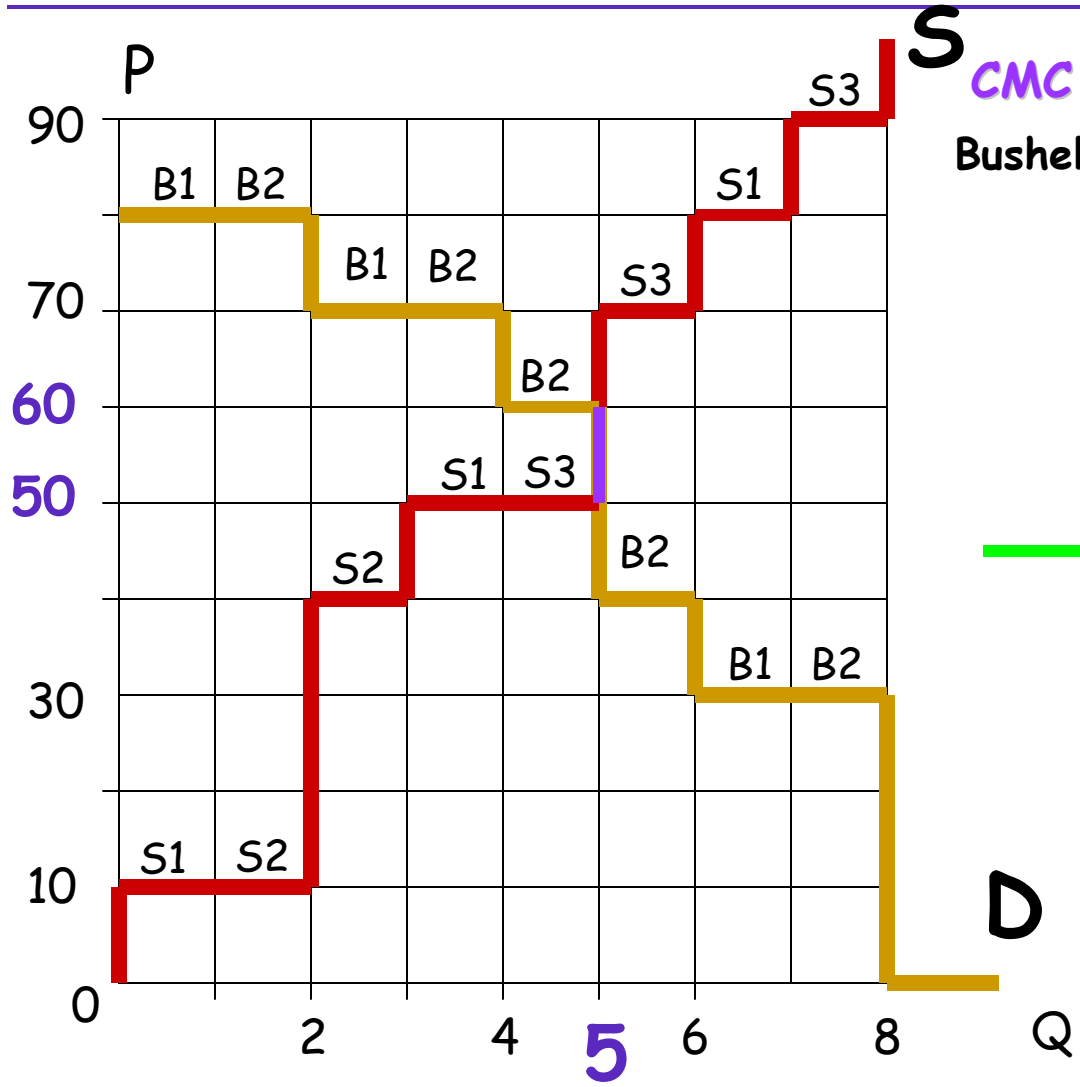
PART C: CMC Points (S=D) Not Unique



CMC Pts: Q*=5, $50 ≤ P*≤ $60

Bushel Unit	MaxBuyPrice	MinSellPrice
1	$80	$10
2	$80	$10
3	$70	$40
4	$70	$50
5	$60	$50
6	$40	$70
7	$30	$80
8	$30	$90
9	$0	$∞
⋮	⋮	⋮

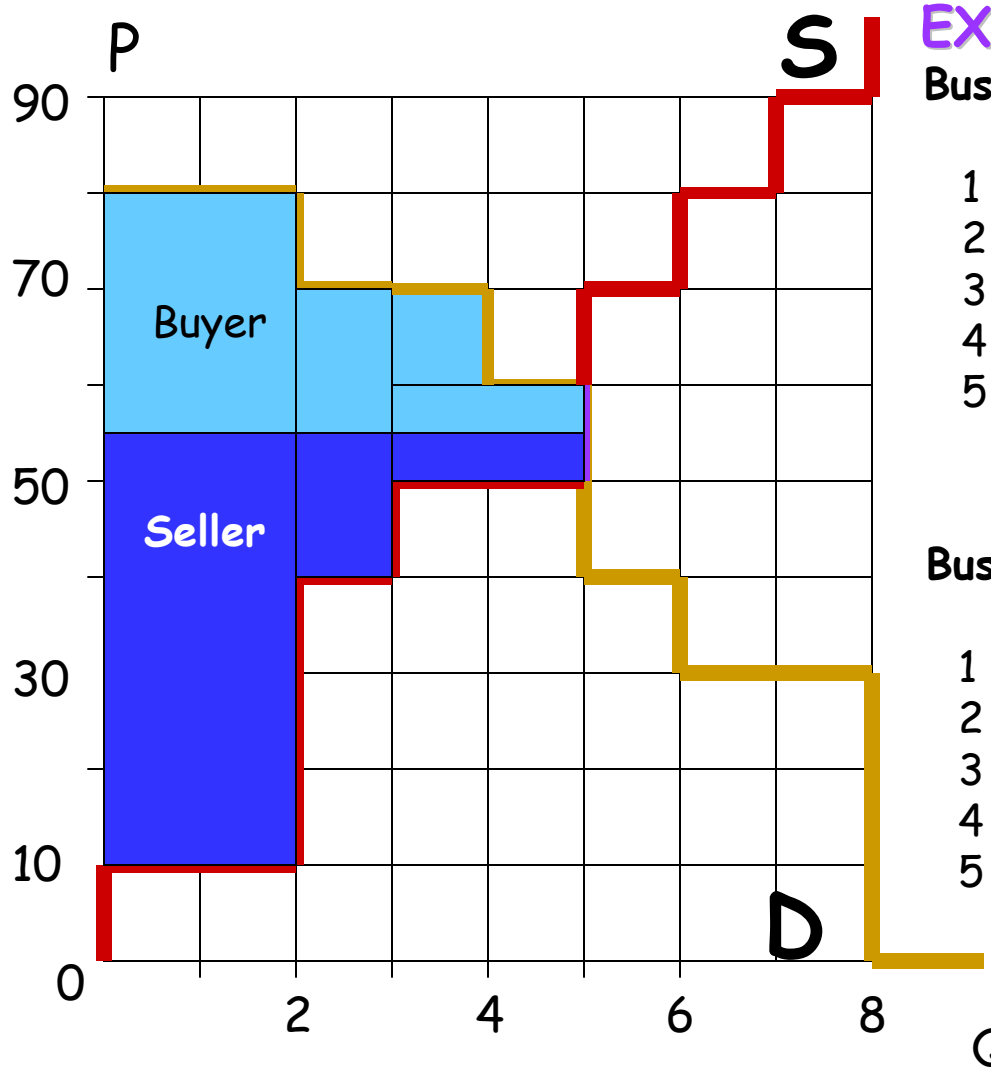
Part C (Remark): Inframarginal (traded) units versus extramarginal (non-traded) units at the CMC Pts



CMC Pts: $Q^*=5$, $\$50 \le P^* \le \$60$

Bushel Unit	MaxBuyPrice	MinSellPrice
1	\$80	\$10
2	\$80	\$10
3	\$70	\$40
4	\$70	\$50
5	\$60	\$50
6	\$40	\$70
7	\$30	\$80
8	\$30	\$90
9	\$0	\$∞

PART D: Net Buyer Surplus and Net Seller Surplus at any CMC Point (S=D)



EXAMPLE CMC: (Q*=5,P*=$55)

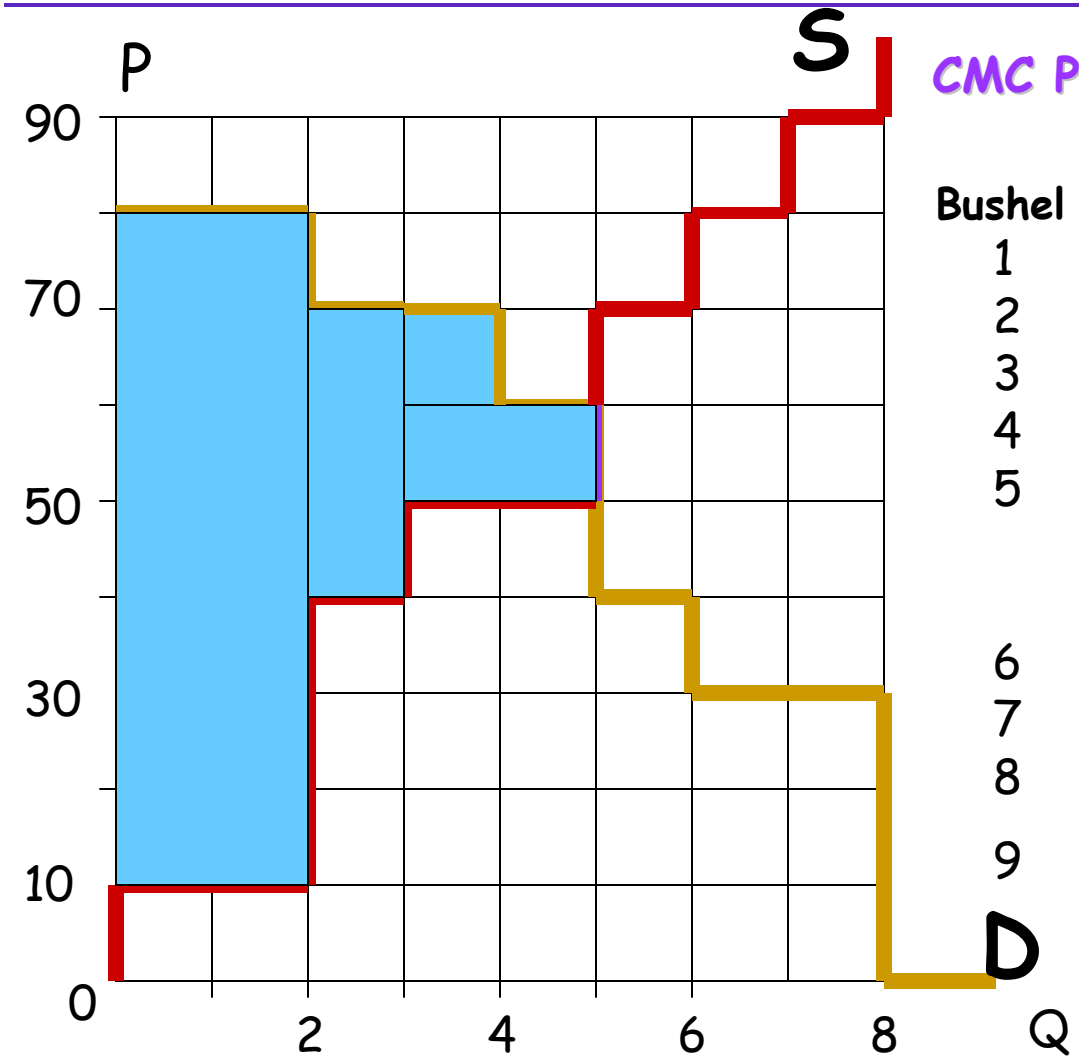
Bushel	MaxBP	- P*=$55	=	BuySurplus
1	$80	- $55	=	$25
2	$80	- $55	=	$25
3	$70	- $55	=	$15
4	$70	- $55	=	$15
5	$60	- $55	=	$ 5

		NET BUYER SURPLUS:		$85

Bushel	P*=$55	- MinSP	=	SellSurplus
1	$55	- $10	=	$45
2	$55	- $10	=	$45
3	$55	- $40	=	$15
4	$55	- $50	=	$5
5	$55	- $50	=	$5

		NET SELLER SURPLUS:		$115

PART E: Total Net Surplus at any CMC Point (S=D)

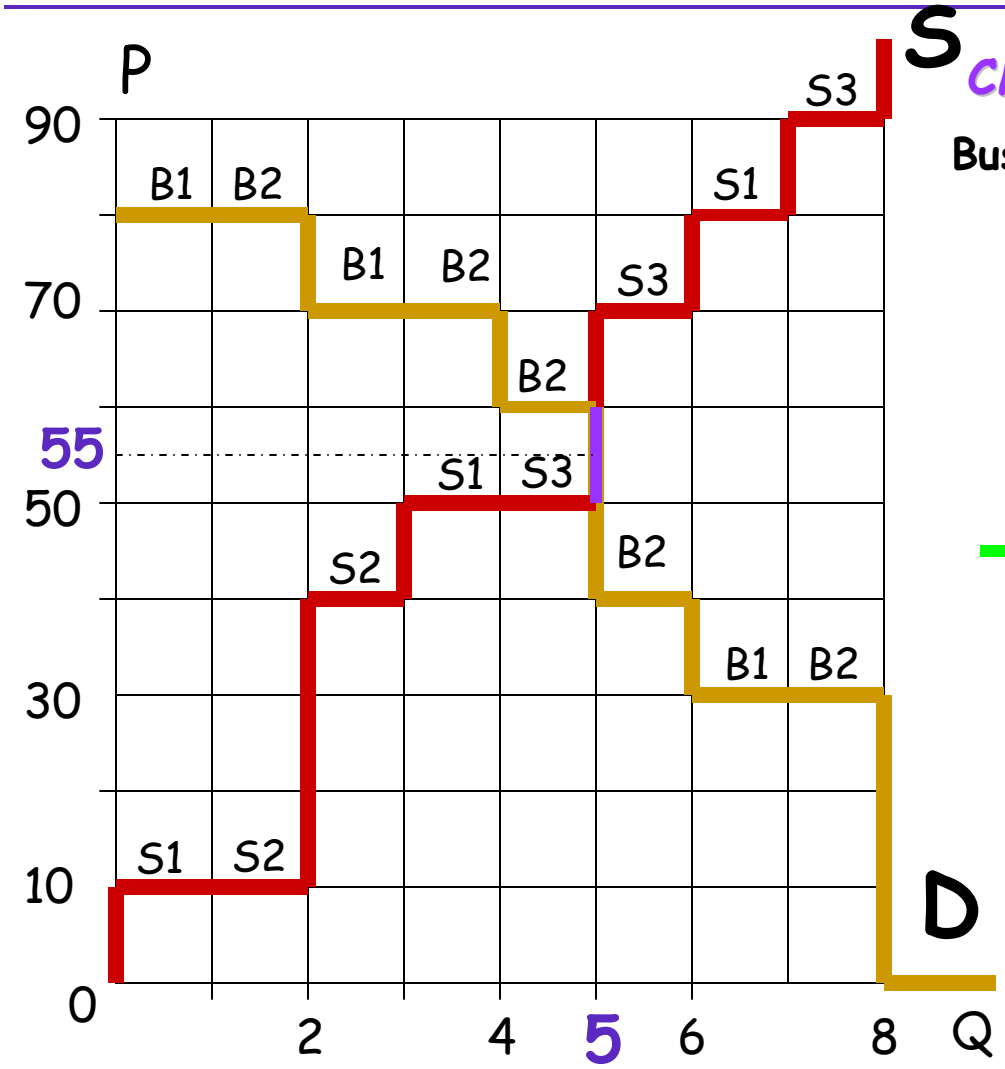


CMC Pts: Q*=5, $50 ≤ P* ≤ $60

Bushel	MaxBuyP		MinSellP		Total NetSurplus
1	$80	-	$10	=	$70
2	$80	-	$10	=	$70
3	$70	-	$40	=	$30
4	$70	-	$50	=	$20
5	$60	-	$50	=	$10
					$200
6	$40		$70		
7	$30		$80		
8	$30		$90		
9	$0		$∞		

Part F: Profitable Opportunity for Seller 2?

(NOTE: Auctioneer sets P* at midpoint of CMC price interval)



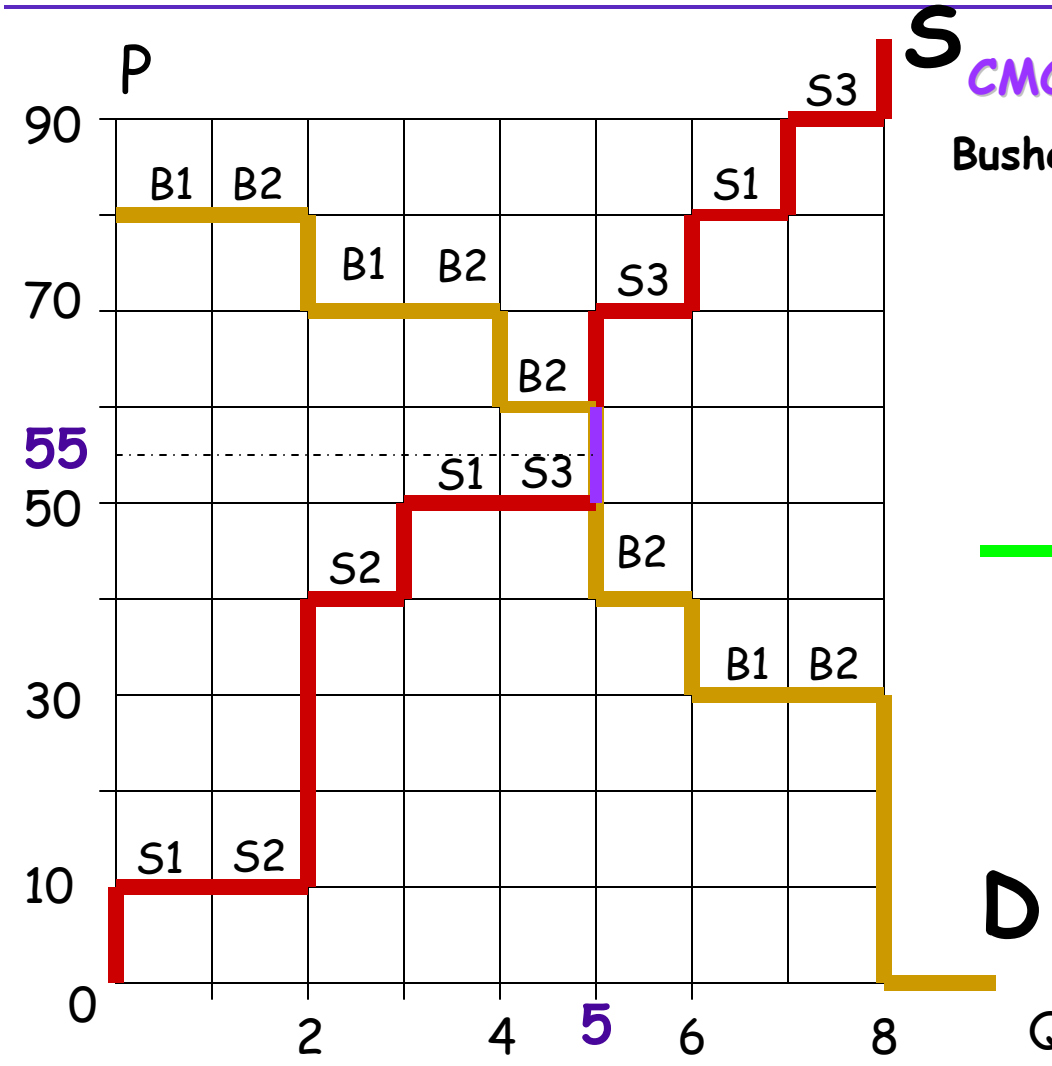
CMC Pt: Q*=5, P* = $55

Bushel Unit	MaxBuyPrice	MinSellPrice
1	$80	$10
2	$80	$10
3	$70	$40
4	$70	$50
5	$60	$50
6	$40	$70
7	$30	$80
8	$30	$90
9	$0	$∞

S2 True Net Surplus at CMC Point is $60

Part F: Profitable Opportunity for Seller 2?

Suppose S2 raises his ***expressed*** reservation price on his 2rd quantity unit from $40 to $60 ??

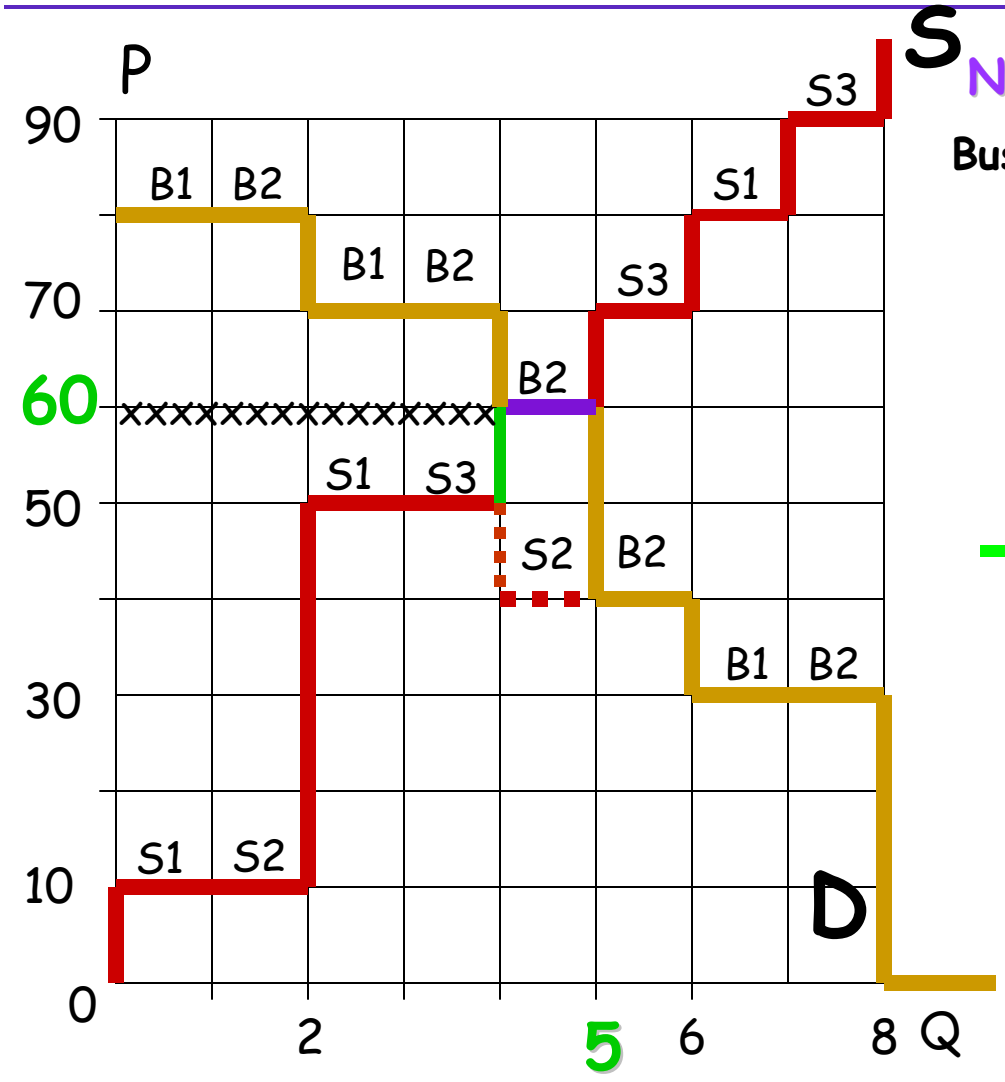


CMC Point: Q*=5, P* = $55

Bushel Unit	MaxBuyPrice	MinSellPrice
1	$80	$10
2	$80	$10
3	$70	$40
4	$70	$50
5	$60	$50
6	$40	$70
7	$30	$80
8	$30	$90
9	$0	$∞

Part F: Profitable Opportunity for Seller 2?

Suppose S2 raises his *expressed* reservation price on his 2rd quantity unit from $40 to $60 ??



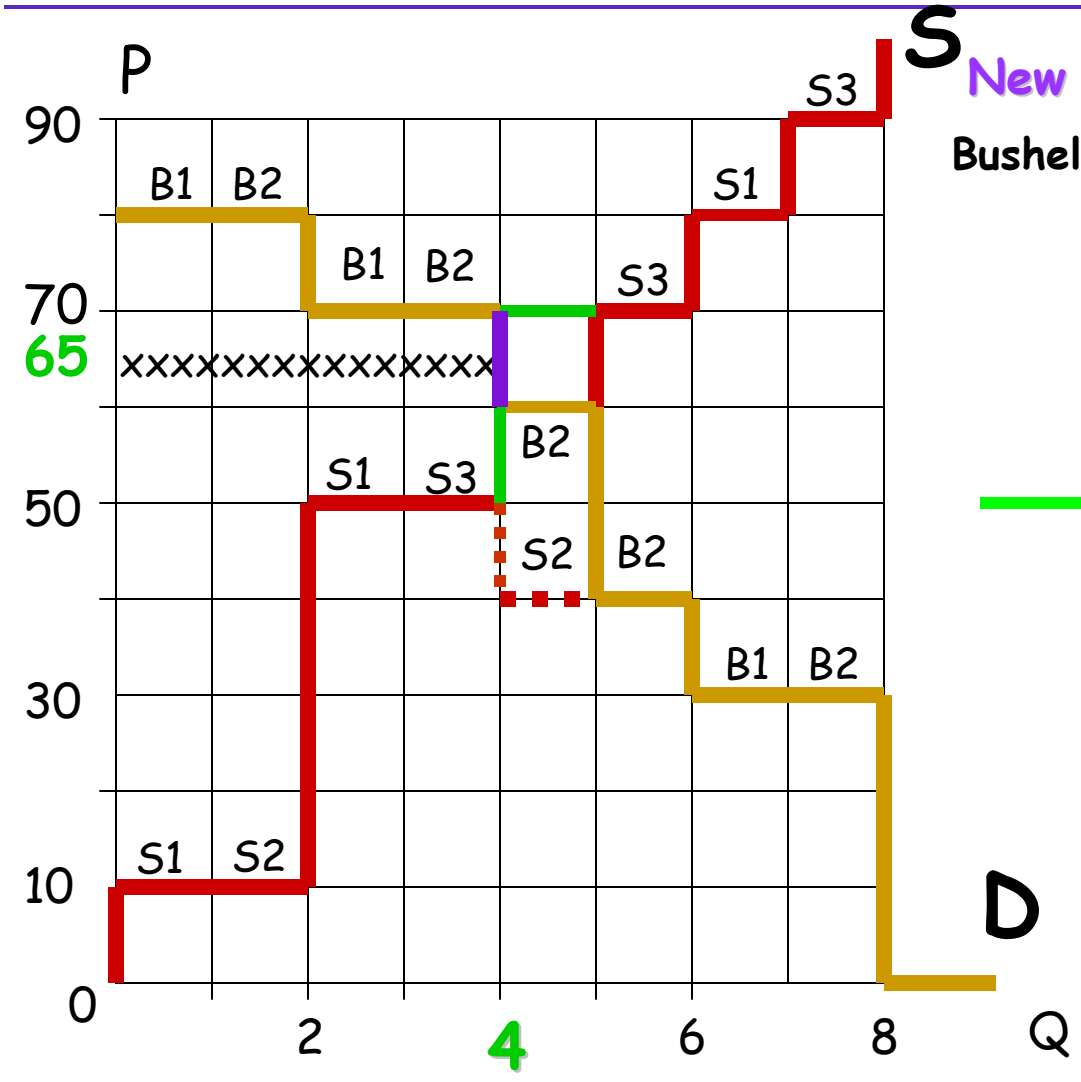
New "CMC" Pt: Q* = 5, P* = $60

Bushel Unit	MaxBuyPrice	MinSellPrice
1	$80	$10
2	$80	$10
3	$70	$50
4	$70	$50
5	$60	$60
6	$40	$70
7	$30	$80
8	$30	$90
9	$0	$∞

S2 True Net Surplus increases to $70 (at the expense of the buyers) !!

Part F: Profitable Opportunity for Seller 2?

Suppose S2 raises his *expressed* reservation price on his 2rd quantity unit from $40 to $70 ??



New "CMC" Pt: Q* = 4, P*= $65

Bushel Unit	MaxBuyPrice	MinSellPrice
1	$80	$10
2	$80	$10
3	$70	$50
4	$70	$50
5	$60	$70
6	$40	$70
7	$30	$80
8	$30	$90
9	$0	$∞

S2 True Net Surplus is only $55 (2nd unit does not sell)