

Analyzing the Output Cases

Sailboat example from spreadsheet:

Cost and demand information:

Cost function: $TC = 1800 + 72 * Q^2$

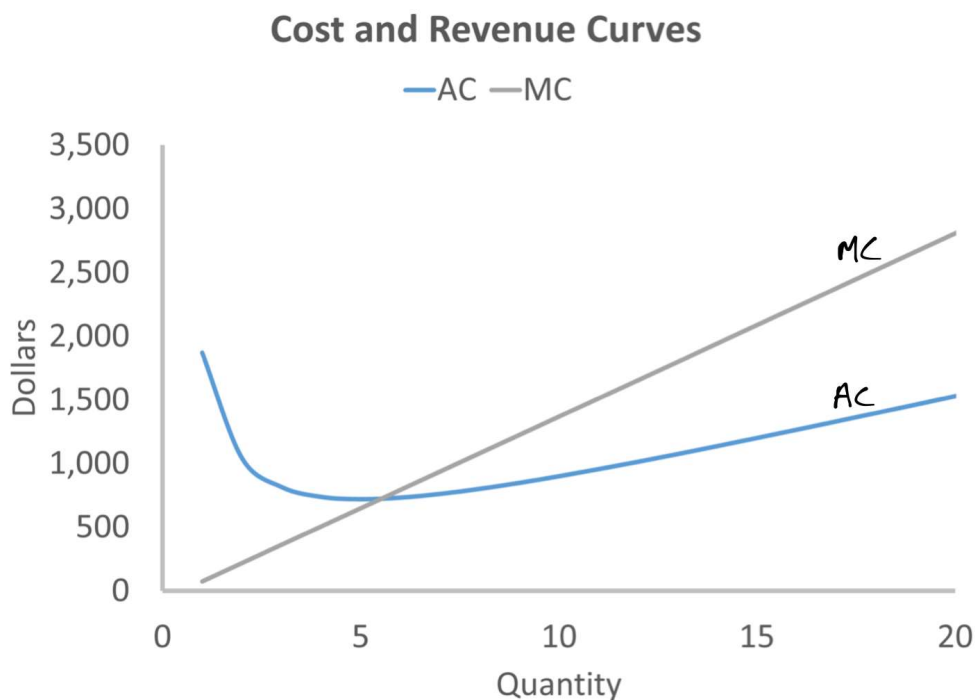
Monopoly demand: $WTP = 4000 - 300Q$

Competitor's demand: $P^* = 1200$

Four output cases:

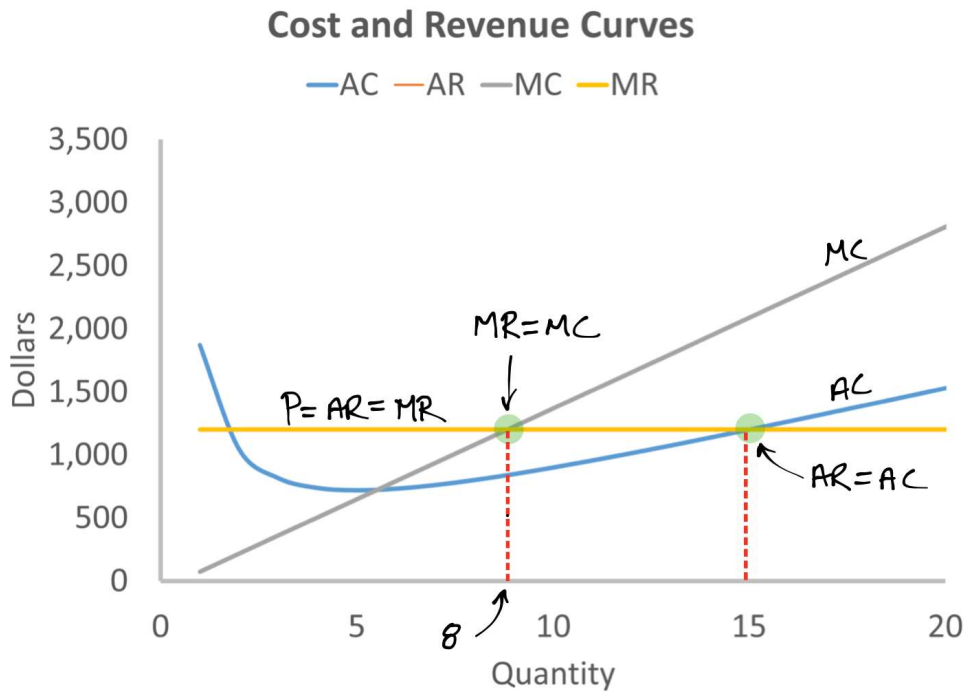
		Market	
		Competitive	Monopoly
Goal	Output max	Case 1	Case 3
	Profit max	Case 2	Case 4

Cost are the same for all four cases:



Adding revenue curves:

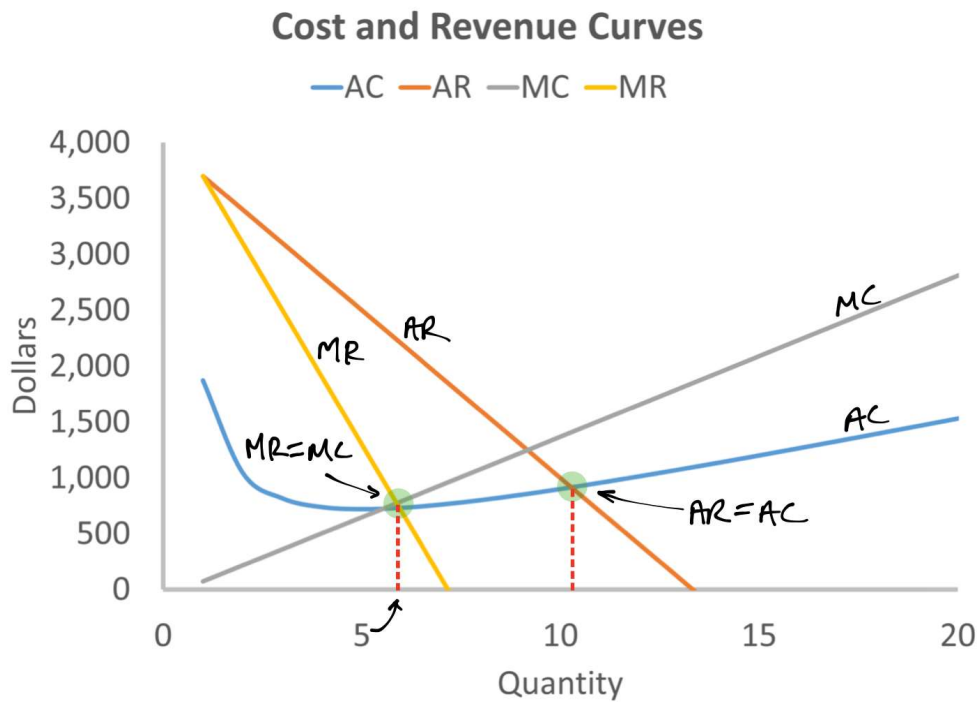
Competition: $P^* = 1200 = AR = MR$



Spreadsheet data for the two cases:

Variable	Profit Max	Output Max
Q	8	15
P	1200	1200
AC	801	1200
$A\pi = P - AC$	399	0
$T\pi = A\pi * Q$	3192	0

Monopoly: $P = 4000 - 300Q = AR, MR = 4000 - 600Q$



Spreadsheet data for the two cases:

Variable	Profit Max	Output Max
Q	5	10
P	2500	1000
AC	720	900
$A\pi = P - AC$	1780	100
$T\pi$	8900	1000

Daily exercise on Google Classroom