

Economics Tripos Part 1 Paper 1
Microeconomics
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Supervision 7: Public economics and market theory

In addition to all of Bob Evans' suggested supervision questions, please answer the following:

1. 2004 Q13
2. 2000 Q7
3. 2009 B10
4. Find all the pure and mixed strategy Nash equilibria of these games:

		L	R
(a)	U	4,0	-1,2
	D	1,1	2,-1

		L	R
(b)	U	1,16	4,6
	D	2,20	3,40

		A	B	C	D
(c)	1	1,1	2,2	3,4	9,3
	2	2,5	3,3	1,2	7,1

5. Consider an industry where $2N$ firms produce a homogeneous good. N firms have a marginal cost of production equal to c_1 (type 1 firms); N firms have a marginal cost of production equal to c_2 (type 2 firms). Market demand is described by the function $p(Q) = a - bQ$, where Q is aggregate output and a and b are positive constants. Output of type 1 (type 2) firms is denoted q_1^n (q_2^n) where $n = 1, \dots, N$.

- (a) What are the Cournot-Nash individual and aggregate quantity outcomes, and what is the resulting market price?
- (b) What happens to the market price when N becomes large? Interpret your result.
- (c) Is aggregate output greater in the duopoly case with different marginal costs (i.e. $N = 1$) or in the case under (a)?