Entry gomes

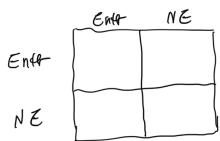
2 firms

period 1; Each firm decides whether to enter (simultoneously and independently)

entry cost is UN [0150]. Each firm only know its own entry cost.

period 1; B competition with den and function q = 10 - pIf only one firm entry - revenue 25

If both firms oner - renewe 0



Battle of the sexes/ Chicken

Assymmetric information / in complete information A pure strategy: $f: [0:50] \rightarrow \{Enfer, NE\}$ If my cost is C I will do f(C)

entering when som cost is more than 25 is (weakly) dominated.

exercise The strategy

enter it my cost is between 3 and 20

is at so wedge dominated

Morson doesn't soft Landida plas agoinst Morson, she enters it has

cast is ≤ 25

suppose Jomes is plusina against kadidia.

If Jones' cost is 5

If James enter

prod 1/2 - If kadidia cost is =25 his remember will be 0 prob 1/2 - 11 11 1/25

Tomes expected from entering is 12.5 - James as

Janes' best response to kadikia is the strong enter if ms cost is ≤ 12.5

Ful at (s the best-response to Tomes strategs)

my revenue from entring

prob 1= 12.5 0 if Jomes Denters

25 11 James does not enfer prob. 3

best response; enter it ms cost is = 3 +25 = 19-7

A NE A priv of strolegies such that each Nosh player's strategy is the best response to opponent st rolegs.

> If my opponent entrs when his cost is $\leq c$ what is my best response?

If I enter my revenue prob. C/50 pa o if opponent enters or Tell II doe not enter prob. 1-450 US

Be st response; entr if my cost $\leq (1 - \frac{9}{50})*25$ $= 25 - \frac{9}{2}$

(C2 = 25- C1/2)

(Cy= 25- C2/2

player 1; entr is cost $\leq C_1$ player 2: 11 11 11 $\leq C_2$

 $C_1 = C_2 = \frac{50}{3}$

If ms opponent enters it his cost $\leq \frac{50}{3}$

ms expected vertice from entering is $\frac{2}{3}*25 = \frac{50}{3}$ I should enter if ms ast $\frac{5}{3}$

Homework; Assume to players;

player 1's entry Got is U[0, 40]

11 2'S 11 11 " " U[0, 80]

find the Bases Nash Equilibrium

Auction games

2 bidders, one painting for sole.

Each plaser has a private value ~ U[0,100]

Each plaser susmit a seated bid b

The winner is the player who submitted the highest b

The pasoff to the winner is pay value - my bid

The pasoff to the loser is o

A pure strategy; A function $1/2 \rightarrow 1/2 \rightarrow 1/2$ if my value is V I bid f(V)

- It's a dominated strategy to bil above sour valu

- Try to find the equilibrium strategy;

Suppose my opponent bid his own value is what is my best response?

Repealed gomes

A small town with two pizza shops

Each shop can charge high (\$19) or low (\$15) per pie

Each store has lowed customers who bus 3000 pie

from that store

There are 4000 pies that will be bought from store with lowest price

one shot gone

prisoner's Dilemma

#Fire shot gomes

Sequential aimination of dominated strategies; play the one-shot equilibrium overs period.

lets assume its count factor B

which means that it ms payoffs are do, an az, az, ay....

then I aggregate this sequence of pasoffs to a Single number

00+ 01 B+ (02 B2)+ (03 B3)+.....

one Two interpretations

_ interst role; \$1 tomorro equals 13=1-rodos

is a probability p that we like another day, and prob. 1-B the world ands

Grim trigger strategy

- At das 1 set a high price

- Continue do have a high price as long as opponent Set a high price. It at some poin opponent defect (low price) switch to low price forence

At home; Grim trigge is not an equilibrium in the 5 shot goome.

claim; GT is an equilibrium in the discounted gome.

Suppose my opponent play GT.

If I play 67 I get
$$85 + 85 \cdot \beta + 85 \cdot \beta^2 + \dots = 85/1-\beta$$

$$What if I decide to derivate and play L todays$$

$$105 + 75 \cdot \beta + 75 + \beta^2 + \dots = 105 + 75 \cdot \beta / 1-\beta$$
This is an equilibrium if

This is an equilibrium It
$$85/_{P} > 105 + 75^{-}B/_{P}$$

$$\beta > \frac{2}{3}$$