

Exam Stats

Mean : 82.5

Median: 85

Cutoffs

A : 90 - 100

B: 80 - 89

C: 60 - 79

D : 50 - 59

F : < 50

#2 on exam)

Average of 9 students = 85

10th student : 65

New average : $\frac{85(9) + 65}{10} = 83$

8 on exam) $x \geq 0$

$$y \geq 0$$

Space in freezer $22x + 33y \leq 15000$

Budget $5x + 8y \leq 900$

Doc's orders $\boxed{x \geq 3y}$ $x - 3y \geq 0$ $y = 1$

~~sketch~~

a

3)

Recall: Two player games

Payoff matrix:

$$\begin{matrix} & \text{C}_1 & \text{C}_2 \\ \text{R} & \begin{bmatrix} 4 & -9 \\ 6 & 8 \end{bmatrix} \\ & r_1 & r_2 \end{matrix}$$

C chose c_1 , R chose r_2 : C pays R 6 dollars

C chose c_2 , R chose r_1 : R pays C 9 dollars

Strategy :

	c ₁	c ₂	
r ₁	4	-9	<u>-9</u>
r ₂	6	8	<u>6</u>

Col
Max | 6 8

If (largest row min) = (smallest col max),
game is called strictly determined (players should
play same strat every single time).

Example:

	c_1	c_2	<u>Row Min</u>
r_1	1	2	1
r_2	3	4	3
r_3	7	5	<u>5</u>

<u>Col Max</u>	7	<u>5</u>
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Strictly determined: Yes

Value: 5

Saddle point: (3, 2)

Solution: r_3, c_2

Example:

				Row Min
3	4	11		3
-5	2	-3		-5
6	6	9		6

Col Max	6	6	11

Strictly determined: No

Value: 6

Saddle point: (3,1) and (3,2)

Solution: r₃, c₁ or c₂

Example:

	c ₁	c ₂	Row Min
r ₁	3	-2	<u>-2</u>
r ₂	-5	4	-5
Col Max	(3)	4	

Strictly determined: No

Value: DNE

Saddle points: None

Solution: None

R picks r₁ \rightarrow C picks c₂
 \rightarrow R picks r₂

Example: Two stores, A-Mart + B-Mart fighting for business. A-Mart has 55% of business, B-Mart has 45%. Both consider building new store

- Both build neither build : Market share stays same
- A-Mart build/B-Mart doesn't : A-Mart gets 65% of business
- B-Mart build/A-Mart doesn't : B-Mart gets 50% of business

Payoff matrix :

	B	NB	
B	0	10	
NB	-5	0	

	B	B	NB	
A	0	10		Row Min
NB	-5	0		
(Col Max)	0	10		

Game is strictly-determined.

Both should build