Exercise 8.1: Best Response

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Setup:

- you observe weather forcast, probability q of rain.
- you choose bus or bike to school.
- nature realizes weather: rain w. prob. q, sunny w. prob. $(1 - q)$
- payoffs:

	it rains	it's sunny
bus	1	2
bike	-2	6

Question: What is your best action given:

- Forecast of $q = 0$ chance of rain?
- Forecast of $q = 1/2$ chance of rain?
- Forecast of $q = 1$ chance of rain? (Answer on Canvas)

Project 2: due today.

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Last Time:

- multi-armed bandit learning
- reduction to online learning

Lecture 7: Game Theory

Project 2: due today.

Last Time:

- multi-armed bandit learning
- reduction to online learning

Today:

- game theory
- bimatrix games
- Nash equilibria
- dominant strategy equilibria

Exercise 8.2: "Battle of the Sexes"

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Setup:

- You are the row player.
- payoffs:

	Opera	Football
Opera	4, 2	0, 0
Football	0, 0	2, 4

Questions:

- Identify the pure Nash equilibria.
- Is there a mixed Nash; if so, what is your probability of selecting Opera in it?
- Let's play! (Imagine the column player is a random classmate.)

(Answer on Canvas)