Name and surname:

U number:

Bridge - MGF 3301 - Section 001

Quiz 2

01/29/2020

Instructions: The total number of points for this quiz is 10. You will get an extra point if you solve correctly the last exercise. Calculators are not allowed (and actually not needed).

Exercise 1

(10 points)

(a) **[1.5 point]** If P is true and $P \Rightarrow Q$ is true, what can we say about Q?

- ☐ Q is true.
- ☐ Q is false.
- ☐ Q can be either true or false.
- ☐ This combination is not possible.

(b) **[1.5 point]** If P is true and $P \Rightarrow Q$ is false, what can we say about Q?

- ☐ Q is true.
- ☐ Q is false.
- ☐ Q can be either true or false.
- ☐ This combination is not possible.

(c) **[1.5 point]** If P is false and $P \Rightarrow Q$ is false, what can we say about Q?

- ☐ Q is true.
- ☐ Q is false.
- ☐ Q can be either true or false.
- ☐ This combination is not possible.

(d) **[1.5 point]** If Q is false and $P \Rightarrow Q$ is false, what can we say about P?

- ☐ P is true.
- ☐ P is false.
- ☐ P can be either true or false.
- ☐ This combination is not possible.

(e) **[1.5 point]** If Q is true and $P \Rightarrow Q$ is true, what can we say about P?

- ☐ P is true.
- ☐ P is false.
- ☐ P can be either true or false.
- ☐ This combination is not possible.

(f) **[1 points]** For one (and only one) among (a), (b), (c), (d) and (e), explain briefly your answer. (Please state which one among (a)-(e) you will discuss here below).

(g) **[1.5 points]** Anna says to Vanessa:

"If you come for dinner, I will cook either tagliatelle or tortellini."

Knowing that Vanessa joined Anna for dinner and that Anna lied, which information do we have about the dishes proposed for dinner?

Exercise 2

(Bonus - 1 point)

Write a non-trivial denial (i.e. not of the form *It is not the case that...*) of the following sentence:

"All students in Bridge to Abstract Mathematics *are from the US."*