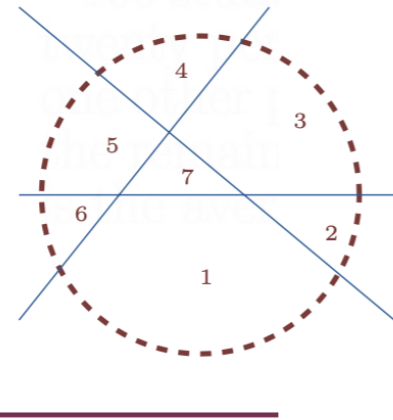# MATH PROBLEM OF THE WEEK

Spring 2023

Problem 9

What is the maximum number of regions into which N straight lines (infinitely long) divides the plane ($\mathbb{R}^2$)? Justify your answer.

Example: When $N = 3$ then #Regions $= 7$.

We welcome solutions from everyone. The undergraduate participant from the NMSU main campus with the most correct solutions at the end of the semester will receive an award of $500.

Solutions must be mathematically rigorous and originally obtained by the participants. Participants will be notified if their solutions are correct within a week.

Deadline: Monday, May 8, 10 am

This is the last problem of Spring 2023 and carries points equivalent to three problems. We will return in September 2023.