



# MATH PROBLEM OF THE WEEK

Fall 2023

## Problem 8

How many  $n$  digit numbers contain an odd number of 1? Express your answer as a simplified formula.

**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, December 4, 10 am**

This is the last problem of Fall 2023 and carries points equivalent to three problems. We will return in January 2024.

**Send solutions to: [mathpotw@nmsu.edu](mailto:mathpotw@nmsu.edu)**

**More information at: <https://math.nmsu.edu/activities/math-problem-of-the-week.html>**