



UGA High School Varsity Math Tournament
October 25, 2025

TEAM ROUND

TIME: 1 HOUR

LENGTH: 3 PROBLEMS

MAX SCORE 210 POINTS
70 POINTS FOR A CORRECT ANSWER.

No calculators, slide rules, or any other such instruments are allowed.
You do not have to provide proofs; only the answers matter.
Each problem is worth 70 points, for a total of 210 points.

Problem 1. What is the smallest positive integer such that, if you write it in base 10, moving the rightmost digit to the leftmost position is the same as multiplying it by 4?

Problem 2. Let N be the smallest positive multiple of 2025 whose decimal digits add up to 2025. Find the sum of the *distinct* decimal digits of N .

Problem 3. If you pick a point on an (infinite) cylinder, it always lies on a line contained in that cylinder. This is not true if you take a point on the surface S described by the equation

$$xyz + x + y + z = 0$$

as it only contains finitely many lines. However some points lie on more than one line. How many such points are there?

