Time limit: 15 minutes.

Instructions: This tiebreaker contains 3 short answer questions. You will submit answers to the problem as you solve them, and may solve problems in any order. You will not be informed whether your answer is correct until the end of the tiebreaker. You may submit multiple times for any of the problems, but **only the last submission for a given problem will be graded**. The participant who correctly answers the most problems wins the tiebreaker, with ties broken by the time of the last correct submission.

No calculators.

1. How many three-digit positive integers have digits which sum to a multiple of 10?

2. A positive integer is called *extra-even* if all of its digits are even. Compute the number of positive integers n less than or equal to 2022 such that both n and $2n$ are both extra-even.

3. Let A be the product of all positive integers less than 1000 whose ones or hundreds digit is 7. Compute the remainder when $A/101$ is divided by 101.