

Worksheet 1

Put full names of group members at the top in alphabetical order by first name. Person whose first name is *last* records the answers on this sheet. Do not use any electronic devices for this worksheet.

1. Simplify the following. Your answer should be between 0 and the modulus.
 - (a) $87 \pmod{12}$
 - (b) $3512352 + 8391832 \pmod{10}$
 - (c) $3512 \cdot 1647 \pmod{10}$
 - (d) $3579135 \cdot 146775432 \pmod{8}$
 - (e) $5^{10} \pmod{9}$
2. Today is Tuesday. What day of the week will September 1, 2036 be? Note that 2028, 2032, and 2036 are leap years.
3. I roll 3 six-sided dice. What is the probability of getting all 1s?
4. I roll 3 six-sided dice. What is the probability of getting at least one 6?
5. How many zeroes does $100!$ end in?