

Name:

**Problem 1:** In this problem we will explore Lemma 1 of Section 6. Let  $p = 11$  and  $a = 4$ .

For each of the following integers, compute their **least residue** modulo 11:

$$4, 2 \cdot 4, 3 \cdot 4, 4 \cdot 4, 5 \cdot 4, 6 \cdot 4, 7 \cdot 4, 8 \cdot 4, 9 \cdot 4, 10 \cdot 4.$$

What do you notice? Write **one** sentence.