

Modular Arithmetic

1. Do as indicated (Level C)

- (a) Find the least positive integer modulo 11 to which the product $3 \times 7 \times 13 \times 515 \times 23$ is congruent. Explain. **No calculators or computers allowed.**
- (b) Find the least positive integer modulo 7 to which the power 4^5 is congruent. Explain. **No calculators or computers allowed.**