

## Week 7 Tuesday

## Dead Languages

Make sure you know your neighbors' names, and then discuss:

Have you ever studied a dead language? If so, which one, and why did you study it? If you haven't, and you had to choose a dead language to study, which one would you choose, and why?

# Binary Exponentiation, Primality Testing

1. For which of the following integers  $m$  will we need to perform the greatest number of multiplications mod 100 if we want to compute  $3^m \bmod 100$  using binary exponentiation?

(A)  $m = 29$

(B)  $m = 30$

(C)  $m = 31$

(D)  $m = 32$

2. Find the binary representation of 143.

3. Compute  $7^{143} \bmod 10$ .