1. Let $n = 2465$

   (a) Apply Pollard's ρ to find the smallest factor of n.
       Perform this calculation by hand.

   (b) Use today's Mathematica notebook to complete the factorization of n by using
       Pollard's ρ.

2. Let $n = 2^{1341} - 19$

   (a) Verify that n is composite using the Miller-Rabin test

   (b) Use today's Mathematica notebook to find at least three prime factors
       p_1, p_2, p_3 of n

   (c) For each prime factor p_i, verify that you obtained a collision in the mod p_i
       sequences $\{x_i'\}$, $\{y_i'\}$