1. Let $p = 7$
   (a) Let $\alpha = 3$ and calculate $\alpha^i \mod p$ for $i = 1, 2, \ldots, 6$

   It's handy to know the *Mathematica* command
   ```
   Table[ Mod[3^i,7], {i,1,6}]
   ```

   (b) Repeat for $\alpha = 2$

   (c) What do you notice?

2. Let $p = 8$ and repeat (1) for $\alpha = 1, 2, \ldots, 7$, (and $i = 1, \ldots, 7$ for each α)

3. Let $p = 31$ and repeat (1) for $\alpha = 2$ and $\alpha = 3$, (and $i = 1, \ldots, 30$ for each α)