1. Build a multiplication table for $\mathbb{Z}_7$

2. Perform the following calculations in $\mathbb{Z}_7$
   (a) $3 - 5$, $\quad -2 - 3$
   (b) $4 \cdot 3^{-1}$, $\quad 2 \cdot 4^{-1}$
   (c) 3^2, $\quad 3^3$, $\quad 3^4$, $\quad 3^5$, $\quad 3^6$, $\quad 3^{12}$, $\quad 3^{21}$

3. Solve the following equations for x
   (a) $3^x \equiv 5 \mod 7$
   (b) $5^x \equiv 2 \mod 7$
   (c) $2^x \equiv 3 \mod 7$