**1. Practice Modular Arithmetic**

Calculate the smallest $x \in \mathbb{N}$ for each of the following expressions:

1. $x = 21 \mod 12$
2. $x = 7 \mod 64$
3. $x = 101 \mod 2$
4. $x = 55 \mod 5$
5. $x = 63 \mod 13$
6. $x = 20 \mod 1$
7. $x = 34 \mod 16$

Decide whether each of the following statements are true or false.

1. $10 = 2 \mod 5$
2. $42 = 7 \mod 5$
3. $18 = -4 \mod 11$
4. $12 = -6 \mod 5$