

1. The sum of two odd integers is even.

2. If  $a \equiv_n b$  and  $b \equiv_n c$ , then  $a \equiv_n c$ .

3. Determine whether the statements  $P \Rightarrow (Q \vee R)$  and  $(P \Rightarrow Q) \vee (P \Rightarrow R)$  are logically equivalent.

4. There is no smallest positive real number.

5. For any  $n \in \mathbb{Z}^+$ ,

$$\sum_{i=1}^n i = \frac{n(n+1)}{2}$$