

$$S = \{ \forall x \in \mathbb{Z} \mid 1 \leq x \leq 5 \}$$

partial order      total order

$$\sum_{i=0}^n i = \sum_{i=1}^n i = \frac{(n+1) \cdot n}{2}$$

$$\begin{array}{rclcl}
 n=50 & 1+50 & = & 51 & \\
 & 2+49 & = & 51 & 51 \cdot 25 \\
 & 3+48 & = & 51 & \\
 & \vdots & & & 
 \end{array}$$

$$\begin{array}{ccccccc}
 & 1 & & + & & n & n+1 \\
 & \underbrace{\hspace{10em}} & & & & & \\
 \frac{n}{2} & 2 & & + & & n-1 & n-1+2 = n+1 \\
 2 & 3 & & + & & n-2 & n-2+3 = n+1
 \end{array}$$

$$\frac{n}{2} \times n+1 = \frac{(n+1) \cdot n}{2}$$