

Worksheet 8 Solution

March 17, 2020

Question 1

a. $P(n) : \forall n \in \mathbb{N}, n \leq 2^n.$

$$\forall k \in \mathbb{N}, P(0) \wedge P(k) \Rightarrow P(k+1)$$

Or, with P fully expanded,

$$\forall k \in \mathbb{N}, 0 \leq 2^0 \wedge k \leq 2^k \Rightarrow k+1 \leq 2^{k+1}$$

Question 2

Question 3

Question 4