

In-Class Worksheet

Discrete Math & Functional Programming— CSCI 054— Spring 2025

Instructor: Osborn

binary	decimal	hexadecimal
11001		
	1782	
		0x3A

$\forall j, k \in \mathbb{Z}$, j and k are odd if and only if jk is odd.

Claim: $1 = 0$.

“Proof”: Suppose that $1=0$. Then

$$\begin{array}{ll} 1 = 0 & \text{(by assumption)} \\ 0 \cdot 1 = 0 \cdot 0 & \text{(multiplying both sides by 0)} \\ 0 = 0 & \end{array}$$

Since clearly $0 = 0$, we conclude that $1 = 0$.

What is the truth table for the proposition $\neg p \Rightarrow \text{False}$?