In-Class Worksheet

Discrete Math & Functional Programming— CSCI 054— Fall 2024

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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

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

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

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