

John
Boyington

Problem 3 solution in FOL

N -Queens-Solution (N , QueenList)

$$\text{Length}([]) = 0$$

$$\text{Length}([a|b]) = \text{Length}(a) + \text{Length}(b)$$

$$\text{Length}(\text{QueenList}) = N$$

$$\text{QueenList} = [[m|x]|n] \rightarrow \text{Length}(m) = \text{Index}(x)$$

$$x \in \text{QueenList} \rightarrow 0 \leq x \leq N$$

$$y, z \in \text{QueenList} \wedge \neg(\text{Index}(y) = \text{Index}(z)) \rightarrow \neg(y = z) \wedge$$

$$\neg(y = z + (\text{Index}(y) - \text{Index}(z)))$$

$$\neg(y = z - (\text{Index}(y) - \text{Index}(z)))$$