Quiz 1

1. Write a truth table for $p \oplus q$.
2. A statement $p \oplus q$ is equivalent to (not(p) and q) or (p and not(q)). Prove that p iff q is equivalent to $\neg (p \oplus q)$. (Prove using equivalence relations)
3. Define proper predicates and write FOLs for the English sentences

- Everyone loves cat or dog
- (Option) Everyone love at least two dogs
- (Option) Everyone loves exactly two dogs
- (Hint): Use predicates such as Person(x), Cat(x), Dog(x), Loves (x, y)