Tutorial 3

Question 1.1

1) Let W denote the Wumpus, P denote the Pit, B denote breezy and S denote stench.

The expression "A square cannot contain the Wumpus and a pit at the same time" would be written as: $\neg\left(W_{i,j} \wedge P_{i,j}\right)$

2) The expression "If a square is breezy then one of the (not diagonally) adjacent squares contains a pit" would be written as:
$B_{i,j} => P_{i+1,j} \vee P_{i-1,j} \vee P_{i,j+1} \vee P_{i,j-1}$

3) The expression "There is a stench in the square if and only if it contains the Wumpus or is (not diagonally) adjacent to the square containing the Wumpus." Would be written as:
$S_{i,j} <=> W_{i,j} \vee W_{i+1,j} \vee W_{i-1,j} \vee W_{i,j+1} \vee W_{i,j-1}$

Question 1.2

1)

2)

3)

Question 2