

## Tutorial 2 in Cognitive Systems

1. What is the meaning of the term “**Occams Razor**”? Give examples, please.
2. (a) Please explain how human beings react in and deal with the process of learning and the recognition of issues!  
(b) We consider the following numbers.

0 1 4 9 10

Give the next numbers, please.

We will consider *Artificial Neural Networks* (ANN) as well as their characteristics.

3. (a) Give a graphical visualisation of a simple and a more complex Artificial Neural Network, please.  
(b) How do ANNs learn?  
(c) What do they learn?  
(d) What are possible limitations of Neural Networks?
4. We will consider a specific problem. A Perceptron, which is a simple neuron type, is used to model the XOR function.  
(a) Please give the truth table for this function.  
(b) Is it possible to solve and model the function using an ANN?  
(c) Do you think that one layer is enough?  
(d) Please calculate the parameters which are necessary!