Q2. Consider an FPGA has a number of 4-input and 1-output LUTs and 2x1 MUXs. A designer wants to implement a seven input arbitrary function. Compute the minimum number of LUTs and MUXs required. If MUXs are also implemented using LUTs, re-compute the number of LUTs. Generalize an expression that presents the number, 'n' of 4-LUTs required to implement an arbitrary 'a' input function. [6]