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Task2:

1: 16

2: 1940

3:

A LUT, which stands for Look Up Table, in general terms is basically a table that determines what the output is for any given input(s). In the context of combinational logic, it is the truth table. This truth table effectively defines how your combinatorial logic behaves. It is a fast way to realize a complex function in digital logic. The address is the function input, and the value at that address is the function output. The advantage is that computing the function only takes a single memory lookup regardless of the complexity of the function, so is very fast. The disadvantage is that it takes memory, especially if you need high resolution for the function input.

Source: https://japan.xilinx.com

https://electronics.stackexchange.com

4: 0.41 w

5:

Simulation: simulation environment, simulator language

Synthesis: memory, summery of registers

Implementation: timing, power