

1. Area percentage: $(50/4888) \times (100) = 1.023 \%$
Delay: 14.708 ns
Levels of Logic: 10
2. On the sheet
3. Delay of the RCA: 42.654
Levels of Logic: 34
Considering the time delay of the CLA, 14 ns, the CLA would work faster than the RCA because it passes through less gates.
4. You need 4 16-bit CLA to make a 64-bit CLA. Therefore, with output t and input buffers, the number of levels of logic would be $(34 \times 4) + 2 = 138$.
5. To create a 64-bit CLA, you must have a pg cell, 16 clls, 1 16-bit cll, and another cll. Connect those in that order and output your sum with a XOR gate. The number of levels of logic for the critical path is 12. First it must pass through a XOR gate which is 1 gate delay, then 4 clls which are 2 gate delays, and the pg which is 1 gate delay. This is without i/o buffers.