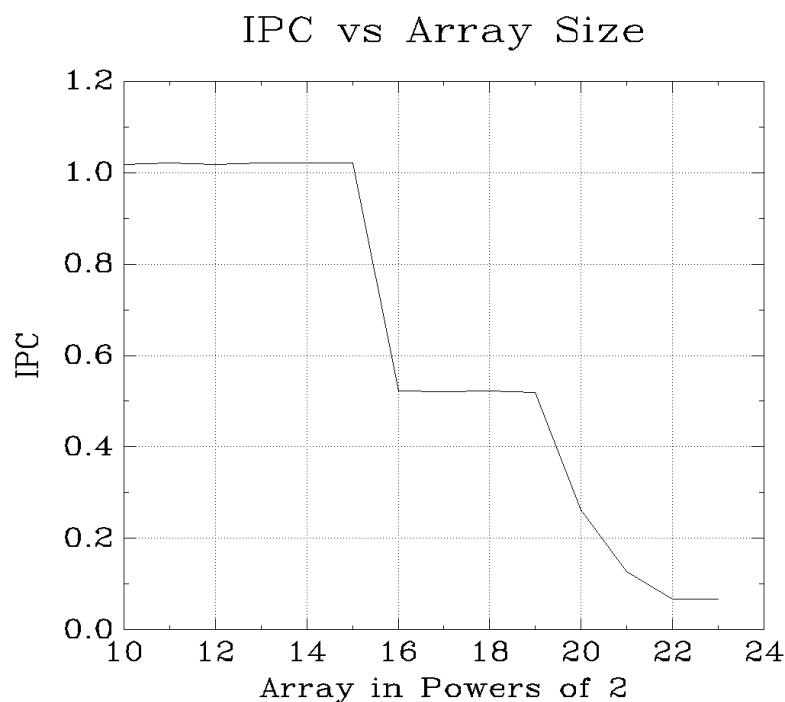Task 2: Calculating the sizes of the cache for a simulator

- **The Idea v3: Access different sized arrays a fixed number of times. So that we can compare the time required with other arrays. (Works!!)**

  - **Description**: The program takes the size of the array (in log values) as a command line argument and allocates the array. The program makes an equal number of accesses to the array elements at every cache line. The time is the total time required to access all the elements from the different caches. (including hits and misses)

  - **Observations:**
    - **Measured Values:**
      L1 Cache: > 32 KB
      L2 Cache: about 512 KB
      L3 Cache: about 2 MB

    - **Real Values:**
      L1 Cache: 48 KB
      L2 Cache: 512 KB
      L3 Cache: 2 MB

IPC vs Array Size

The plots show a sudden drop in Instruction per Cycle after 15, 19, and 21. Therefore the previous array size is the cache size.