

# Flashcards

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Use these aloud. Hide the answer with your hand or Obsidian reading mode.

| Prompt                     | Answer                                                    |
|----------------------------|-----------------------------------------------------------|
| FIFO data structure?       | Queue                                                     |
| LIFO data structure?       | Stack                                                     |
| Sorted BST traversal?      | Inorder                                                   |
| Unweighted shortest path?  | BFS                                                       |
| Binary-search requirement? | Sorted sequence                                           |
| Quicksort worst case?      | $O(n^2)$                                                  |
| Merge-sort time?           | $O(n \log n)$                                             |
| Page fault?                | Needed page is not in RAM                                 |
| Four deadlock conditions?  | Mutual exclusion, hold-wait, no preemption, circular wait |
| TCP vs UDP?                | Reliable/ordered vs low-overhead/connectionless           |
| DNS port?                  | 53                                                        |
| HTTPS port?                | 443                                                       |
| ARP does what?             | IP address to local MAC address                           |
| DHCP does what?            | Gives IP configuration                                    |
| /27 usable hosts?          | 30 traditional usable hosts                               |
| ADC?                       | Analog to digital converter                               |
| Watchdog?                  | Detect/recover from software hang                         |
| UART?                      | Asynchronous serial communication                         |
| I2C?                       | Two-wire addressed serial bus                             |
| Sprint?                    | Time-boxed Agile iteration                                |
| Regression test?           | Check old features after change                           |
| BVA for 1–100?             | 0, 1, 100, 101                                            |
| MOD?                       | Remainder                                                 |

| Prompt                                   | Answer           |
|------------------------------------------|------------------|
| DIV?                                     | Integer quotient |
| WHILE minimum loops?                     | 0                |
| REPEAT minimum loops?                    | 1                |
| Equal-distance average speed?            | $2xy/(x+y)$      |
| Work rate of person finishing in x days? | $1/x$            |
| Unit digit cycle length for 2?           | 4                |
| Percent increase then equal decrease?    | Net loss         |

[[09\_Revision/Last\_Hour\_Cheat\_Sheet|Last-hour cheat sheet]]