

CP2 : Reading Material III

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1 Maximum Flow

Theory + Algorithms

There are a lot of very good write-ups on maximum flow, we recommend the chapter “Network Flow”, from Algorithm Design by Kleinberg and Tardos. For mostly equivalent, but much more formal treatment, you can also read the chapter “Maximum Flow”, from Introduction to Algorithms by Cormen et al.

Note that the algorithms to compute max flow (and in particular, push-relabel) are quite hard to implement; we recommend that you learn how it works, and in the process implement the algorithm once, but for in-contest usage, it is much preferable to use a well tested implementation (with attribution). For example, I personally use [this](#) implementation of Dinic’s algorithm (which is another algorithm to compute maximum flow).

Applications

- Everything from sections 7.6 thru 7.12 of Kleinberg and Tardos (both inclusive).
- This topcoder [article](#). Note that this also has a part1, which has the same theory as the books (with fewer details).