

3-4. Practice Skills – From Rating 2200 to 2400

This is the last part of practice skills in this blog. Actually, I had been orange for long time, and also in virtual contests my average performance had been orange for a long time. That's because my practice method that I did before got stuck when I reached orange.

Rating 2200 and 2400 is actually very different – if you have average performance of rating 2200, if you participate contest more, touch at red-rating (it means reaching max rating 2400) seems like not hard. But getting average performance of rating 2400 is much more difficult than you think. If your rating is exactly 2400, in Div.1 contest, generally you should get around 80-percentile rank (e.g. If 525 people participated, you should get 105th) to gain 1 rating or more.

To be rating 2400, skills as follows are needed:

- You should have skills that stated in previous section (rating 2200)
- You should solve **difficult problems** which are only solved by less than 100 people in Div1 contests

If you want to solve difficult problems, ad-hoc problems. According to TozanSoutherPacks' comment from my previous tutorial blog (<http://codeforces.com/blog/entry/53341?#comment-373965>), "To reach more than 2600, you should solve boss problems and all these are ad-hoc problems or many-steps consideration problems." I think that it's true, but for me I felt like even if you want to reach rating 2400, solving **some part of** many-steps ad-hoc problems are needed.

[[How to Practice]]

The most secure way to reach 2400 is "Solve 4000 problems". I solved more than 4000 problems including TopCoder, AtCoder, Codeforces, and problems from some Japanese online judges.

Actually, there is a legend (or actually truth) that one of the greatest coder tourist solved 10000+ problems in his life.

But there may be a lot of people who think they have no time. So I will give you some effective ways.

At first, there are a lot of educational problems in AtCoder. I recommend you should solve problem E and F (especially 700-900 points problem in AtCoder) of **AtCoder Regular Contest, especially ARC058-ARC090**. Though old AtCoder Regular Contests are balanced for “considering” and “typical”, but sadly, AtCoder Grand Contest and recent AtCoder Regular Contest problems are actually too biased for considering I think, so I don’t recommend if your goal is gain rating in Codeforces. (Though if you want to gain rating more than 2600, you should solve problems from AtCoder Grand Contest)

For me, actually, after solving AtCoder Regular Contests, my average performance in CF virtual contest increased from 2100 to 2300 (I could not reach 2400 because start was early)

If you cannot solve problems, I recommend to give up and read editorial as follows:

Point value	600	700	800	900	1000-
CF rating	R2000	R2200	R2400	R2600	R2800
Time to editorial	40 min	50 min	60 min	70 min	80 min

If you solve AtCoder educational problems, your skills of competitive programming will be increased. But there is one more problem. Without practical skills, your rating won’t increase.

So, you should do **50+ virtual participations (especially Div.1)** in Codeforces. In virtual participation, you can learn how to compete as a purple/orange-ranked coder (e.g. strategy) and how to use skills in Codeforces contests that you learned in AtCoder. **I strongly recommend to read editorial of all problems except too difficult one** (e.g. Less than 30 people solved in contest) after the virtual contest. I also recommend to write reflections about strategy, learns and improvements after reading editorial on notebooks after the contests/virtual.

In addition, about once a week, I recommend you to make time to think about much difficult problem (e.g. R2800 in Codeforces) for couple of hours. If you could not reach the solution after thinking couple of hours, I recommend you to read editorial because you can learn a lot. Solving high-level problems may give you chance to gain over 100 rating in a single contest, but also can give you chance to solve easier problems faster.

Lastly, I guess that this method works over 30% of people because I reached Codeforces red by using this method, and my twin brother square1001 reached TopCoder red by using the method extended for TopCoder. Hope new red-ranked coders will be born by using my method :)