


Educational Codeforces Round 90 [Rated for Div. 2]

By [pikmike](#), [history](#), 17 hours ago, translation,  

Hello Codeforces!

On Jun/25/2020 17:35 (Moscow time) Educational Codeforces Round 90 (Rated for Div. 2) will start.

Series of Educational Rounds continue being held as [Harbour.Space University](#) initiative! You can read the details about the cooperation between [Harbour.Space University](#) and Codeforces in the [blog post](#).

This round will be **rated for the participants with rating lower than 2100**. It will be held on extended ICPC rules. The penalty for each incorrect submission until the submission with a full solution is 10 minutes. After the end of the contest you will have 12 hours to hack any solution you want. You will have access to copy any solution and test it locally.

You will be given **6 or 7 problems** and **2 hours** to solve them.

The problems were invented and prepared by Roman [Roms](#) Glazov, Adilbek [adedalic](#) Dalabaev, Vladimir [vovuh](#) Petrov, Ivan [BledDest](#) Androsov, Maksim [Ne0n25](#) Mescheryakov and me. Also huge thanks to Mike [MikeMirzayanov](#) Mirzayanov for great systems Polygon and Codeforces.



Good luck to all the participants!

[Read more »](#)

 Announcement of Educational Codeforces Round 90 (Rated for Div. 2)

 **+223**   [pikmike](#)  17 hours ago  **34**

2020 ICPC Graph Mining Challenge — Powered by Huawei: Battle of the Connected Brains

By [ICPCNews1](#), 5 days ago,  

Hello everyone!

Announcing the **ICPC Graph Mining Challenge**, Powered by Huawei and brought to you by [ICPC U](#). Graphs are a powerful mechanism for representing many aspects of our daily lives, from mobile call routing to disease tracking. Answering various graph-related questions enables solutions to some of the most challenging, modern problems. The ICPC Challenge presents a problem from some area in computing. The area and problem style may be very different from the standard ICPC problems. Previous contests included new programming languages, multi-agents, parallel programming, etc. The ICPC Challenge provides a platform for ICPC to experiment with new problem types. It also provides participants with experience in some new area and problem type.

The ICPC Graph Mining Challenge will take place online during ICPC Day Zero on **27 June, 2020, 11:00-14:00 UTC**. This round is **unrated for all participants**. Day Zero is a celebration of the 2020 ICPC World Finals, hosted by the Moscow Institute of Physics and Technology (MIPT). **Everybody is welcome to participate**. This is an individual competition. Participants will be divided into three groups: 2020 ICPC World Finals Contestant, 2020 ICPC World Finals Coach (includes co-coaches), and Participants. The 2020 ICPC World Finals Contestants and Coaches with the best graph solutions will be recognized as ICPC Challenge Winners. The top-scoring participants will also receive great prizes.

→ Pay attention

Before contest
[ICPC Challenge 2020: Practice](#)
 04:20:43
[Register now »](#)

Before contest
[Educational Codeforces Round 90 \(Rated for Div. 2\)](#)
 07:55:43
[Register now »](#)

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#	User	Rating
1	MiFaFaOvO	3681
2	tourist	3567
3	Um_nik	3527
4	ecnerwala	3458
5	maroonrk	3409
6	300iq	3317
7	Petr	3272
8	LHiC	3229
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2	antontrygubO_o	192
3	Ashishgup	182
4	pikmike	180
5	vovuh	176
6	Radewoosh	169
7	Um_nik	167
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[ICPCNews1](#) → [2020 ICPC Graph Mining Challenge — Powered by Huawei: Battle of](#)

Join ICPC Challenge Warm-up Challenge

Join ICPC

Both rounds are unrated for all participants

Huawei will provide prizes to the 12 winners in each group accordingly:

- Group 1: 3 hour Challenge — ICPC 2020 World Finalists
- Group 2: 3 hour Challenge — ICPC Coaches and Co-Coaches
- Group 3: 3 hour Challenge — All participants

Group 1-3 Winners	Quantity per place	Prize
ICPC Challenge / 1-4th place	1	HUAWEI P40 PRO
ICPC Challenge / 5-8th place	1	HUAWEI MATEPAD PRO LTE
ICPC Challenge / 9-12th place	1	HUAWEI WATCH GT 2E

Each participant may win at most one prize for this Challenge.

All participants must agree to follow the [2020 ICPC Graph Mining Challenge Rules](#).

Participation Instructions:

1. Read and agree to follow the rules.
2. Create a Codeforces account if you don't already have one.
3. Associate your Codeforces account with your ICPC account if you have one. Though optional, this is necessary if you want to compete as a 2020 ICPC World Finalist or Coach.
4. Register for the contest [here](#).
5. Please, make sure to [complete the Warm-up](#) at least 24 hours before the event to test your access, etc.
6. There will be large input files. They will be available here at least 24 hours in advance. We recommend you to download them before the event.
7. [Go here](#) at least 20 minutes prior to the start of the contest.

Good luck to all participants!

[Read more »](#)

icpc, icpc2020, huawei, graphs

+256

ICPCNews1

5 days ago

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Codeforces Round #652 (Div. 2)

By [DeadlyCritic](#), [history](#), 10 days ago, 

—In the name of God —

Hi community,

I'm glad to invite you to my first contest, [Codeforces Round #652 \(Div. 2\)](#) which will be held at [Jun/23/2020 17:05 \(Moscow time\)](#) (notice the unusual time). The problems are mainly prepared and invented by me. The round is rated for participants with rating strictly less than 2100, others are able to take part in the round out of competition. You will be given 2 hours to solve 6 problems.

Firstly I'd like to thank [adedalic](#) for coordinating and reviewing the round, as well as helping with many different things.

I'd like to thank [antontrygubO_o](#), [physics0523](#), [McDic](#), [Ashishgup](#), [dannyboy20031204](#), [Kuzey](#), [Return_0](#), [FieryPhoenix](#), [ma_da_fa_ka](#), [ITDOI](#), [AM_I_Learning](#), [pikmike](#), [lynmisakura](#), [JustasLe](#) and [ArimeZ](#) for testing the round and giving valuable feedback.

[the Connected Brains](#)

[DeadlyCritic](#) → [Codeforces Round #652 \(Div. 2\) Editorial](#)

[decoder__](#) → [AtCoder Beginner Contest](#)

[mostafa.saad.fci](#) → [Releasing my private problems lists for ICPC/IOI/Online training](#)

[pikmike](#) → [Educational Codeforces Round 86 Editorial](#)

[pikmike](#) → [Educational Codeforces Round 90 \[Rated for Div. 2\]](#)

[Okrut](#) → [Codeforces Round #647 Editorial](#)

[acash](#) → [finding nth root using binary search](#)

[DishonoredRighteous](#) → [Codeforces Round #643 \(Div. 2\) Editorial](#)

[Naseem17](#) → [War declaration against khaled97ha](#)

[Lotte10](#) → [Strings and queries on it! How to solve ?](#)

[chokudai](#) → [AtCoder Beginner Contest 171 Announcement](#)

[drastogi21](#) → [A serious proposal for Division 1.5](#)

[deadmanalive059](#) → [Cheating in Codeforces](#)

[plagiarism00](#) → [mass cheating by some people of same organisation](#)

[icecuber](#) → [CSES DP section editorial](#)

[grapo_Oranges](#) → [Solving D.TediousLee Using Recurrence in O\(log n\)](#)

[Peace_789](#) → [Planets Queries II CSES](#)

[HolkinPV](#) → [Codeforces Round #112 \(Div. 2\) Tutorial](#)

[KaranKaira](#) → [How to handle edges cases during contest??](#)

[SecondThread](#) → [Algorithms Dead Ep 3: Segment Trees \(+ hard ST Problem\)](#)

[saillikthik](#) → [My second Day at Codeforces \(Since I started solving problems actively\)](#)

[Nickolas](#) → [Microsoft Q# Coding Contest — Summer 2020: Main round](#)

[ahmed_aly](#) → [Goodbye A2 Online Judge :\(](#)

[PLAYBOy_malik](#) → [Please stop letting unrated accounts post and comment](#)

[Detailed →](#)

Also I'd like to thank coauthors, [amiralisalimi](#), [AS.82](#) and [davooddkarehki](#) for helping me with inventing and choosing the problems.

Finally, thanks to [MikeMirzayanov](#) for very nice and convenient Codeforces and Polygon platforms.

I wish you all will find the problems interesting, thank you for participating, and good luck!

Scoring distribution : 500 – 1000 – 1500 – 2000 – 2500 – 3000

UPD : [Editorial is out](#)


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 Announcement of Codeforces Round #652 (Div. 2)

 #announcement



 **+1215** 

 [DeadlyCritic](#)

 10 days ago

 [393](#)

Microsoft Q# Coding Contest — Summer 2020: Main round

By [Nickolas](#), 7 days ago, , 

Microsoft's Quantum team and Codeforces are excited to invite you to Microsoft Q# Coding Contest — Summer 2020! The contest will run from **June 19 to June 22**.

As a reminder, last weekend we held a warmup round with easier tasks on the topics that have not been covered in the [previous contests](#). You can find the problems from the warmup round for practice [here](#), and the described solutions [here](#). There is also a list of great learning and practice resources [here](#).

Several useful reminders:

- The contest is unrated :-)
- Solutions are accepted only in Q#.
- The tasks are grouped by topic, and the tasks within one topic are ordered in approximate order of increasing difficulty. If you find a problem too hard, check the next problems in this topic and problems from different topics, they might turn out to be easier for you.
- Custom Invocation allows you to run Q# code on Codeforces servers; make sure your code has namespace `Solution` and an operation with a signature `operation RunQsharp () : Bool` defined in it.
- And the really important stuff: the top 50 ranked participants will receive a Microsoft Quantum T-shirt, and 25 random participants who solved at least one problem but didn't finish in the top 50 will also receive a Microsoft Quantum T-shirt! Here is a preview (we haven't printed the T-shirts yet, so the final look in print might differ slightly):


[Read more »](#)

 Announcement of Microsoft Q# Coding Contest - Summer 2020

 microsoft, q#, quantum, quantum computing



 **+331** 

 [Nickolas](#)

 7 days ago

 [227](#)

Codeforces Round #651 (Div. 2)

By [Ashishgup](#), 6 days ago, , 

Hi everyone!

I would like to invite you to another one of our rounds, that I set with my friends [FastestFinger](#), [smartnj](#), [the_hyp0cr1t3](#) and [ridbit10](#).

The round [Codeforces Round #651 \(Div. 2\)](#) will take place on [Jun/20/2020 17:35 \(Moscow time\)](#). If your rating is less than **2100**, this round will be rated for you; otherwise, you can participate out of competition.

I would really like to thank my co-setters and:

- **isaf27** for coordinating our round.
- **cerberus97**, **Devil**, **Taran_1407**, **Alireza_Keshavarz**, **Vivek1998299**, **KonaeAkira**, **demoralizer**, **Dragnoid99**, **agtxdy**, **Rajdeep**, **aryanc403**, **lavish315**, **DeadlyCritic**, **Utkarsh.25dec**, **AmShZ**, **_Aaryan_** and **erekle** for testing the problems.
- **MikeMirzayanov** for Codeforces and Polygon platforms.

Based on past reviews, we have:

- Tried to make A easier and make the difficulty gradient a bit better
- Reduced the number of AdHoc problems and made the problemset more diverse

You will be given **6 problems** and **2 hours 15 minutes** to solve them.

Good luck! :D

The scoring distribution will be: 500 – 1000 – 1500 – 2000 – 2500 – (2000 + 1250)

Upd: [Quick editorial](#) — Hope you guys found the problems interesting :D

[Read more »](#)

+1642

[Ashishgup](#)

6 days ago

[304](#)

Codeforces Global Round 8

By **Endagorion**, [history](#), 7 days ago,

Hi!

On [Jun/18/2020 17:45 \(Moscow time\)](#) we will host [Codeforces Global Round 8](#).

It is the second round of a 2020 series of [Codeforces Global Rounds](#). The rounds are open and rated for everybody.

The prizes for this round:

- 30 best participants get a t-shirt.
- 20 t-shirts are randomly distributed among those with ranks between 31 and 500, inclusive.

The prizes for the 6-round series in 2020:

- In each round top-100 participants get points according to the [table](#).
- The final result for each participant is equal to the sum of points he gets in the four rounds he placed the highest.
- The best 20 participants over all series get sweatshirts and place certificates.

Thanks to XTX, which in 2020 supported the global rounds initiative!

Problems for this round are set by me. Thanks a lot to the coordinator **300iq** and testers **thenymphsofdelphi**, **Lewin**, **Golovanov399**, **Osama_Alkhodairy**, **gamegame**, **dorijanlendvaj**, **HenriqueBrito**, **kocko**, **ruban**, **Origenes**, **Ilya-bar**, **rahulkhairwar**. Their feedback was a huge help and affected the problemset greatly.

The round will have eight problems and will last 150 minutes.

Scoring distribution: 500 — 1000 — 1500 — 1750 — 2500 — 3000 — 3500 — 3000+1500

Good luck, and see you on the scoreboard!

UPD: the round has concluded, congratulations to the winners:

1. **ecnerwala**
2. **tourist**
3. **Marcin_smu**
4. **Petr**
5. **Radevoosh**

6. **Um_nik**
7. **maroonrk**
8. **eatmore**
9. **snuke**
10. **KAN**

Check current Codeforces Global series standings [here](#) (courtesy of **aropan**).

You can find the editorial [here](#).


Stay tuned for prizes announcement!

[Read more »](#)

 Announcement of Codeforces Global Round 8

 **+1301** 

 [Endagorion](#)

 7 days ago

 [466](#)

About Gift Distribution

By **Una_Shem**, [history](#), 4 weeks ago, translation, , 

Hello everyone!

“My name is Una and I am from the Codeforces team” — this is usually how my messages to users of the site begin. One of the reasons why I write a message is very joyful — sending out gifts to the winners of the competitions and now also to participants of crowdfunding dedicated to the 10th anniversary of Codeforces.

That's what I'd like to talk about a little bit.

Everyone knows where it all starts — there is a round with gifts, in the comments to which after the ending the coordinators or Mike post a list of winners.

Then, in a short time, all winners receive a system message asking them to update the data about the size of the T-shirt and address. In some special cases, such as crowdfunding, for example, all participants receive an email. For various reasons, not everyone has time to fill out the necessary data on time, and therefore later some winners may receive another similar message from me personally.

This is very important!

We don't produce T-shirts or hoodies (or print on them) ourselves: other companies do this for us, therefore, by the time we contact them, we should already have all the data about the sizes of T-shirts! We wait until the last moment for the data from each winner. **We are waiting and asking to be extremely careful when filling out the [address and size of the T-shirt](#).** In case someone makes a mistake in the size, there's just nothing we can do after t-shirts are manufactured. Please note the size charts differ from manufacturer to manufacturer thus extra discretion is advised. We recommend disregarding the letter designation (S, M, XXL, etc.) and pay attention to centimetres. So if their dimensional grid differs from ours, we choose the size so that it fits in the best way with the size in our size chart.

Sometimes we contact gift companies by ourselves, and sometimes our partners do it, with the support of which this or that round is held.

Our next step is to wait for gifts to be made and delivered.

And as soon as they come to us, we start packing and sending gifts to all the winners. Then everyone receives a system message with a tracking number of the packages.

Sometimes **the whole process can take a long time**, sometimes a VERY long time. Especially now! Due to the COVID-19 pandemic and mandatory self-isolation in our country, we face many additional difficulties: many contractors are either slow or not working at all. In some cases, we have to change things, for example, as was correctly noted in the comments under the announcement to "Kotlin Heroes: Episode 4": the badges have changed to stickers.

We are trying to speed up the process, but, to our great regret, delays in delivery are

inevitable. Due to the epidemic, some countries stopped mail exchange with Russia (all parcels to these countries will be sent as soon as everything is settled), and some significantly increased the delivery time of parcels.

Most important: the gifts will surely reach all the winners! We put all our efforts into it!

Please accept our heartfelt thanks for your patience and understanding! We really appreciate your support!

P.S. And this is usually the last phrase in my messages: "If you have any questions, write me a message and we will figure it out together."

So feel free to dm me. :)

[Read more »](#)

+1278

[Una Shem](#)

4 weeks ago

[36](#)

Codeforces Round #650 (Div. 3)

By [Stepavly](#), [history](#), 10 days ago, translation,

Hello, Codeforces!

<almost-copy-pasted-part>

Hello! [Codeforces Round #650 \(Div. 3\)](#) will start at [Jun/16/2020 17:35 \(Moscow time\)](#). You will be offered 6 problems (one of them will have subtasks) with expected difficulties to compose an interesting competition for participants with ratings up to 1600. However, all of you who wish to take part and have a rating 1600 or higher, can register for the round unofficially. The round will be hosted by rules of educational rounds (extended ACM-ICPC). Thus, during the round, solutions will be judged on preliminary tests, and after the round it will be a 12-hour phase of open hacks. We tried to make strong tests — just like you will be upset if many solutions fail after the contest is over.

You will be given 6 problems and 2 hours to solve them.

Note that **the penalty** for the wrong submission in this round (and the following Div. 3 rounds) is **10 minutes**.

[Remember](#) that only the trusted participants of the third division will be included in the official standings table. As it is written by link, this is a compulsory measure for combating unsporting behavior. To qualify as trusted participants of the third division, you must:

- take part in at least two rated rounds (and solve at least one problem in each of them),
- do not have a point of 1900 or higher in the rating.

Regardless of whether you are a trusted participant of the third division or not, if your rating is less than 1600, then the round will be rated for you.

The problems for this round were invented by **MikeMirzayanov**, me and **Supermagzzz** and prepared by me and **Supermagzzz**.

Thanks to **MikeMirzayanov** for platforms and coordination of our work. Thanks to [harlequen](#), [manta1130](#), [lynmisakura](#), [Gassa](#), [Rox](#), [antontrygubO_o](#), [armoking](#), [JustasLe](#), [iankury](#), [Sho10](#), [bugdone](#), [HAEtaRhoEta](#) for help in round preparation and testing the round.

Good luck!

[Editorial](#)

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Announcement of Codeforces Round #650 (Div. 3)



+384

[Stepavly](#)

10 days ago

[415](#)

Registration for Volga Summer Camp 2020 is opened

By [misis](#), [history](#), 11 days ago, , 

We are glad to inform you that **Volga Summer Camp 2020** – open competitive programming camp – will take place on July 7-18. It is organised by NUST MISIS together with P.G. Demidov Yaroslavl State University with the support of SIT (Schaffhausen Institute of Technology).

At the moment a lot of events are held in the remote mode and our camp is not an exception. This year it will be conducted online.

Teams of up to 3 members are invited to join.

There are two levels of difficulty (two divisions):

- DivC welcomes teams, getting ready for the semi-final of ICPC. Half of the time they are going to deal with quarter-final ICPC contests, and the rest of it will be dedicated to private thematic contests. The focus of our lessons will be on coordinate compression, number theory, probability problems, network flow in graph theory.
- DivB is for teams aiming directly at ICPC final. All the contests here are team ones. The contests are going to be of the two difficulty levels: those of semi-finals and quarter-finals of ICPC.

During the camping period there will be 10 training days and 2 days off. Training days will have the usual schedule: contest→tutorial→upsolving. For divC there will be lectures before private contests. The lectures in the camp will be given by coaches from NUST MISIS, YarSU and ITMO on one of the platforms for video conferencing. It is the first time foreign teams are invited to DivB. DivB classes will be held in two languages: both in Russian and in English.

Arrangement fee for participants from Russia is 5000 rubles per person.

Arrangement fee for foreign teams is 100 euros per person.

To participate fill in the [application form](#) before the 25th of June.

Volga Camp in VK: <https://vk.com/volgacamp>

Official Volga Camp page: <http://volgacamp.ru/en/camp>


The information about previous camps can be found on our official website:
<http://acm.misis.ru/camp/>

The camp is supported by SIT(Schaffhausen Institute of Technology) and ICPC NERC HQ (ICPC: Northern Eurasia Contests Headquarters).

[Read more »](#)

 **+101** 

 [misis](#)

 11 days ago

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← **1** 2 3 ... 169 170 →



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