


## Codeforces Global Round 19

By [Mangooste](#), [history](#), 2 days ago, translation, 

Hello, Codeforces! (□□□□□□□□)□ □

On [Feb/12/2022 17:35 \(Moscow time\)](#) we will host [Codeforces Global Round 19](#).

It is the first round of a 2022 series of [Codeforces Global Rounds](#) supported by XTX Markets. The rounds are open and rated for everybody.

The presents 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 presents for the 6-round series in 2022:

- 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.

The problems were written and prepared by [Mangooste](#), [TeaTime](#), [\\_\\_JustMe\\_\\_](#) and [EvgeniyPonaskov](#).

We are very thankful to people, who made this round possible:

- [DmitryGrigorev](#) for the great coordinating and helping us with preparing problems.
- Our testers: [gamegame](#), [dorijanlendvaj](#), [fedoseev.timofey](#), [tfg](#), [fastmath](#), [Allvik06](#), [Pechalka](#), [Alexdat2000](#), [pakhomovee](#), [Frankenween](#), [philmol](#), [Ultrasonic](#), [tox1c\\_kid](#), [Viktorius](#) and [Urvuk3](#) for their feedback, especially [tfg](#) for finding mistakes in the statements.
- [MikeMirzayanov](#) for codeforces and polygon platform!
- [KAN](#) for his [contribution](#) to this round as well.

You will have 2.5 hours to solve 8 problems. And we recommend you to read all the problems!


The score distribution will be announced closer to the start of the round.

[Read more »](#)

 Announcement of Codeforces Global Round 19

 **+557** 

 [Mangooste](#)

 2 days ago

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## Codeforces Round #770 (Div. 2)

By [Alexdat2000](#), 8 days ago, translation, 

Greetings to all humans and robots on this site!

[seVIII777](#), [crazyilian](#), [Mangooste](#), [imachug](#) and me ([Alexdat2000](#)) invite everyone to participate in the [Codeforces Round #770 \(Div. 2\)](#), which will take place this [Feb/06/2022 17:35 \(Moscow time\)](#). **This round will be rated for all participants with a rating of strictly less than 2100.** You will have **2 hours and 30 minutes** to solve 6 problems. There will be an interactive problem in the round, so we recommend all new participants to read [Interactive Problems Guide](#).

### → Pay attention

**Before contest**  
[Codeforces Global Round 19](#)  
 23:17:12  
[Register now »](#)  
 \*has extra registration

### → Streams

[ITMO Lecture. Bipartite Matching](#)  
 By [pashka](#)  
 Stream is running

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#	User	Rating
1	<a href="#">tourist</a>	3809
2	<a href="#">MiracleFaFa</a>	3604
3	<a href="#">Radewoosh</a>	3548
4	<a href="#">maroonrk</a>	3526
5	<a href="#">Benq</a>	3513
6	<a href="#">slime</a>	3511
7	<a href="#">Um_nik</a>	3479
8	<a href="#">greenheadstrange</a>	3430
9	<a href="#">ksun48</a>	3400
10	<a href="#">ecnerwala</a>	3345

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#	User	Contrib.
1	<a href="#">YouKn0wWho</a>	207
2	<a href="#">Monogon</a>	202
3	<a href="#">Um_nik</a>	193
4	<a href="#">awoo</a>	190
5	<a href="#">-is-this-fft-</a>	184
6	<a href="#">sus</a>	178
7	<a href="#">antontrygubO_o</a>	173
7	<a href="#">ErichTo</a>	173
9	<a href="#">maroonrk</a>	169
10	<a href="#">SecondThread</a>	166

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The traditional thank-you list:

- Thanks to **antontrygubO\_o** for coordinating us for a very long time and helping to improve one of the tasks
- Thanks to **alexela12345** for tasks that did not survive till the final version of the round
- Thanks to **Pechalka**, **alexela12345**, **Kirill22**, **physics0523**, **PurpleCrayon**, **teraqqq**, **tem\_shett**, **FairyWinx**, **Dart-Xeyter**, **Vladithur**, **Igorfardoc**, **despair\_101**, **shishyando**, **Brahma\_tet** and **KROL\_fsfbj** for quality testing of the round and very helpful feedback
- Thanks to **MikeMirzayanov** for the Codeforces and Polygon

Scoring distribution: **500 — 1250 — 1500 — 2000 — 2500 — 3000**.

Codeforces Round #770 (Div. 2) is ready to resist the rise of machines

▶ Do you think you are stronger than a robot or not?

We wish all participants high rating! Show that people are still worthy!

UPD: [Editorial](#)

[Read more »](#)

🔔 Announcement of Codeforces Round #770 (Div. 2)

🔗 round, google, 179 contest

▲ +928 ▼

👤 [Alexdat2000](#)

📅 8 days ago

💬 302

## Pinely Treasure Hunt Contest

By pinely, [history](#), 8 days ago, 🇬🇧

Hello, codeforces!

Pinely is a high-frequency trading company. We trade at the exchanges all over the world. This year we are the sponsors of the online Petrozavodsk competitive programming camp. We have prepared a fun contest for camp participants and invite everybody to join it on CodeForces!

[Pinely Treasure Hunt Contest](#) will be held on Saturday, [Feb/05/2022 13:00 \(Moscow time\)](#).

The participants will be offered to solve an interactive optimization problem with open tests and will have 3.5 hours to work on it. You can join individually or in teams of up to 3 people. The contest will be **unrated**. Winners among camp participants as well as the 3 best teams in overall standings will be awarded with pinely t-shirts.

Since the contest is targeted for participants of the Petrozavodsk training camp, it'll be most interesting for **participants with codeforces rating 2000+**.

We are grateful to **MikeMirzayanov** for the opportunity to host the contest on codeforces.

A couple of words about pinely: we conduct algorithmic trading on various exchanges. Our offices are located in Moscow and Amsterdam. Our colleagues face various challenges, such as: coming up with trading strategies and implementing them, optimizing trading systems to achieve the fastest reaction to the market events, storage and processing of high volumes of historical data. Ability to write effective C++ code, algorithmic thinking and mathematical intuition are all useful in our day-to-day work, so a significant part of our team participates in various programming and math competitions.

To learn more about pinely you can visit [pinely.com](#) or you can find our colleagues on CF in [pinely organization](#). You can send us your CV to [hr@pinely.com](#), even if you are not participating in the contest.

Good luck and have fun!

UPD Congratulations to the winners!

Winners of the joint contest:

1. [itmo.algo.teaching](#): **tourist**, **pashka**, **Nebuchadnezzar**

[omhari](#) → [Use of std::function in c++](#) 📄

[Mangooste](#) → [Codeforces Global Round 19](#)



[YuezhengLing](#) → [Bug or feature](#) 📄

[Bellala](#) → [Is "return" necessary for a non-void function?](#) 📄

[sevl1777](#) → [Codeforces Round #770 \(Div. 2\) editorial](#) 📄

[sslotin](#) → [A chapter on SIMD algorithms](#) 📄

[TuHoangAnh](#) → [maximize the number of connected components in a graph.](#) 📄

[dolphingarlic](#) → [IOI 2003 Reverse — 100-point solution](#) 📄 ⌚

[sguu](#) → [off-topic](#) 📄 ⌚

[MaveV](#) → [String of ABC](#) 📄

[isaf27](#) → [Editorial for Technocup 2022 — Elimination Round 2 and Codeforces Round #755 \(Div. 1, Div. 2\)](#) 📄

[lazy\\_loop](#) → [Whats the difference?](#) 📄

[pashka](#) → [ITMO Algorithms, Semester 4](#) 📄

[E869120](#) → [JOI 2021/2022 Final Round Online Contest](#) 📄

[awoo](#) → [Educational Codeforces Round 94 Editorial](#) 📄 ⌚

[The\\_std7](#) → [CF Tracker](#) 📄

[MikeMirzayanov](#) → [I am Mike Mirzayanov. AMA!](#) 📄

[MaveV](#) → [Switch](#) 📄

[DS007](#) → [Codeforces Round #695 \(Div. 2\)](#) 📄 ⌚

[feecle6418](#) → [Tutorial of Codeforces Round 729 \(Div.2\)](#) 📄

[Supermagzzz](#) → [Codeforces Round #725 \(Div. 3\) Editorial](#) 📄

[alanturing4507](#) → [A question on the editorial of Problem C, Codeforces Round #769](#) 📄

[strange14](#) → [Problem : GCD and MST](#) 📄

[Qualified](#) → [Using template in Vim](#) 📄 ⌚

[Omar\\_Hafez](#) → [\[Competitive Programming\] A new tool for competitive programmers](#) 📄

[Detailed →](#)

2. SPb NRU ITMO 3: [VArtem](#), [antonkov](#), [qwerty787788](#)
3. [xvr and his friends](#): [wygzgyw](#), [frame233](#), [wasa855](#)

Winners among the participant of Petrozavodsk training camp:

1. [Never Give Up](#): [Valera\\_Grinenko](#), [Crescendo](#), [353ceregа](#)
2. [Saratov SU Daemons](#): [awoo](#), [Neon](#), [vovuh](#)
3. [A-SOUL\\_Unofficial](#): [rg\\_gr](#), [pigstd](#), [dXqwq](#)


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 Announcement of Pinely Treasure Hunt Contest

 [pinely](#), [ptz](#), [hft](#)


 **+342** 

 [pinely](#)

 8 days ago

 [69](#)

## AlphaCode (DeepMind) Solves Programming Problems on Codeforces

By [Una\\_Shem](#), 9 days ago, 

Hello, community.

Today DeepMind announced a new achievement of AI. And it is directly related to what we love — programming problems.

They have developed AI capable of solving some competitive programming problems! The future has arrived.

You should read solutions of SelectorUnlimited, WaggleCollide, and AngularNumeric solutions. All solutions are written automatically. The only input for writing solutions is a problem statement in English.

Details can be read at the link <https://deepmind.com/blog/article/Competitive-programming-with-AlphaCode>

Apparently, if these accounts would take part in real competitions, then their rating would be about 1300.

Terminator is ready to take part in Codeforces Round #770 (Div. 2)


In 1997 Kasparov played against (and lost) the supercomputer DeepBlue. Perhaps we will be witnessing a confrontation between [tourist](#) and AI in near future. What do you think?

[Read more »](#)

 [ai](#), [alphacode](#), [deepmind](#)


 **+3018** 

 [Una\\_Shem](#)

 9 days ago

 [324](#)

## Educational Codeforces Round 122 [Rated for Div. 2]

By [awoo](#), [history](#), 12 days ago, translation, 

Hello Codeforces!

On [Jan/31/2022 17:35 \(Moscow time\)](#) Educational Codeforces Round 122 (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 Adilbek **adedalic** Dalabaev, Vladimir **vovuh** Petrov, Ivan **BledDest** Androsov, Maksim **Neon** Mescheryakov and me. Also huge thanks to Mike **MikeMirzayanov** Mirzayanov for great systems Polygon and Codeforces.

Good luck to all the participants!


UPD: [Editorial is out.](#)

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 Announcement of Educational Codeforces Round 122 (Rated for Div. 2)

 **+240** 

 [awoo](#)

 12 days ago

 [318](#)

## Codeforces Round #769 (Div. 2)

By [Igorfardoc](#), [history](#), 2 weeks ago, 

Hi, Codeforces!

**Vladithur** and I are pleased to invite you to our [Codeforces Round #769 \(Div. 2\)](#), which will be held on [Jan/30/2022 17:35 \(Moscow time\)](#). **This round will be rated for participants with rating lower than 2100.**

We would like to express our great gratitude to:

- **irkstepanov** and **KAN** for ~~not rejecting our tasks~~ excellent coordination of the round and assistance in preparing problems.
- **Ormlis**, **antontrygubO\_o**, **generic\_placeholder\_name**, **Alexdat2000**, **Dart-Xeyter**, **wxhtzdy**, **sohsoh**, **zer0brain**, **radal**, **bsic211**, **stevancv**, **maxverr**, **Scrubpai**, **Artem1303**, **RomkaRomantic** and **MaxShch** for testing the round and providing useful feedback.
- **MikeMirzayanov** for cool platforms Codeforces and Polygon.







You will have **2 hours** to solve **5 problems**, one of which is divided into two subtasks.

**The scoring distribution is 500 — 1000 — 1500 — 2000 — (1500 — 1500)**

We have tried to make clear statements and strong ~~pre~~tests for the problems and hope you will have fun and increase your rating!

Good luck!

Also, we would like to start the trend of evaluating the round's problems. We think it will give valuable feedback to authors and make future contests better. So please, vote for each problem after the round's end.

-  [Problem A](#)
-  [Problem B](#)
-  [Problem C](#)
-  [Problem D](#)
-  [Problem E1](#)
-  [Problem E2](#)

UPD: Editorial is [here](#).

UPD2: Congratulations to the winners!

Div. 1 + Div. 2:

1. **kotatsugame**
2. **tute7627** and **jiangly**
3. -
4. **I\_love\_chtholly**

5. Alan\_girlfriend

Div. 2:

1. [I\\_love\\_chtholly](#)
2. Alan\_girlfriend
3. [Wlxsohandsome](#)
4. 778
5. [i\\_will\\_be\\_less\\_than\\_blue](#)

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 Announcement of Codeforces Round #769 (Div. 2)

 codeforces round, 769, 179 contest, nobody reads tags

 **+386** 

 [Igorfardoc](#)

 2 weeks ago

 [150](#)

## Codeforces Round #768 (Div. 1, Div. 2)

By [humbertoyusta](#), [history](#), 3 weeks ago, 

Hello codeforces!

[BrayanD](#), [dmga44](#) and I are glad to invite you to [Codeforces Round #768 \(Div. 1\)](#) and [Codeforces Round #768 \(Div. 2\)](#) which will be held on [Jan/27/2022 17:35 \(Moscow time\)](#).

Each division will have **6** problems, and you will have **2** hours to solve them. The round will be rated for both divisions.

We would like to thank:

- [Aleks5d](#) for his excellent round coordination.
- [albertolg101](#) and [jmrh\\_1](#) for helping in the early stages of the contest.
- [I\\_Remember\\_Olya\\_ashmelev](#), [nweeks](#), [16204](#), [windazz](#), [Ali.Kh](#), [vaaven](#), [marcOS](#), [low\\_](#), [Riladavin](#), [TeaTime](#), [MDario](#), [aniervs](#), [Dragonado](#), [Saborit](#), [4qqqq](#) and [saarang](#) for testing and providing useful feedback.
- [MikeMirzayanov](#) for the great platforms Codeforces and Polygon.

Score Distribution:

Div. 2: 500 – 1000 – 1500 – 2250 – 2250 – 3000.

Div. 1: 500 – 1250 – 1250 – 2000 – 2500 – 3000.

Good luck to all participants! Hope you enjoy the contest.

UPD1: [Editorial](#)

UPD2: Congratulations to the winners.

Div. 1:




1. [Um\\_nik](#)
2. [Miracle0viiiiv](#)
3. [heno239](#)
4. [ksun48](#)
5. [Radewoosh](#)
6. [maroonrk](#)
7. [mhq](#)
8. [Vercingetorix](#)

Congratulations to all of them for solving all problems!

Div. 2:

1. YuulBA
2. wcdR
3. Dalia12
4. hrgd
5. Pure\_container

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-  Announcement of Codeforces Round #768 (Div. 1)
-  Announcement of Codeforces Round #768 (Div. 2)
-  codeforces round #768, announcement, cuban round

 +341 

 [humbertoyusta](#)

 3 weeks ago

 [253](#)

## Codeforces Round #767 (Div. 1, Div. 2)

By [SlavicG](#), [history](#), 3 weeks ago, 

### Hello Codeforces!

[magnus.hegdahl](#) and I are glad to invite you to [Codeforces Round #767 \(Div. 1\)](#) and [Codeforces Round #767 \(Div. 2\)](#) which will be held on [Jan/22/2022 17:35 \(Moscow time\)](#)! This round is rated for both divisions.

In each division there will be **6 problems** and **2 hours** to solve them.

We would like to thank the following amazing people:

- [74TrAkToR](#) for great coordination of the round and translating the statements!
- [efimovpaul](#), [agrayush13](#), [ak2006](#), [BidoTeima](#), [QuangBuiCP](#), [mesanu](#), [\\_Vanilla\\_](#), [down](#), [FedShat](#), [gupta\\_samarth](#), [namanbansal013](#), [MoonKnight](#), [stefdasca](#), [AlperenT](#), [DlvanCode](#), [lox123](#), [voventa](#), [kpw29](#), [ptd](#), [AlexLuchianov](#), [PurpleCrayon](#), [abc864197532](#), [Maksim1744](#) for testing, providing invaluable feedback and being awesome!
- [Nika\\_Tamlani](#) for helping in the early stages of the round!
- [MikeMirzayanov](#) for great Codeforces and Polygon platforms!
- You, for participating and upvoting!

Score distribution:



Div. 2: 500 — 750 — 1250 — 1500 — 2000 — (1500 — 1000).

Div. 1: 500 — 750 — 1250 — (1000 — 750) — 2250 — 3000.

UPD1: [ak2006](#) and [namanbansal013](#) have prepared video editorials for most div. 2 problems that will be available on [ak2006's channel](#) and [namanbansal013's stream](#)

UPD2: [Editorial](#) is out!

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-  Announcement of Codeforces Round #767 (Div. 1)
-  Announcement of Codeforces Round #767 (Div. 2)

 +869 

 [SlavicG](#)

 3 weeks ago

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