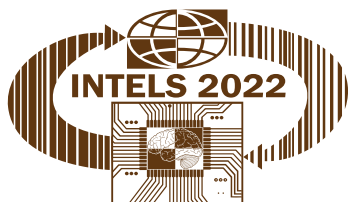




LOMONOSOV
MOSCOW STATE
UNIVERSITY



ISP RAS



15th International Conference
«Intelligent Systems – 2022»

INTELS 2022

14-16 December 2022
RAS, Moscow, Russia

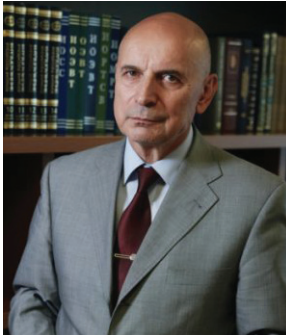


PROGRAM

intels-conf.ru



15th International Conference «Intelligent Systems – 2022»



Dear Colleagues!

I welcome you at the opening of the 15th International Conference “Intelligent Systems” (INTELS’22). Today, artificial intelligence and intelligent systems are the most popular and promising area of research. We see that the obtained results are applied in robotics, big data processing and in the digital economy. I am sure that a qualitative change in life on planet Earth from political conditions to daily routine will be associated with achievements in this area. I wish you to work actively at the Conference, enjoy communication with colleagues and new creative ideas.

Director of FRC CSC RAS
Dean of Faculty of Computational Mathematics
and Cybernetics
Lomonosov Moscow State University
RAS member Igor Sokolov

Dear colleagues, friends!

On behalf of the Program committee, I am glad to welcome all participants and guests of the 15th International Conference “Intelligent Systems” (INTELS’22).

The organizers of INTELS’22 are the Federal Research Center Computer Science and Control of the RAS, Ivannikov Institute for System Programming of the RAS, Lomonosov Moscow State University, St. Petersburg Electrotechnical University “LETI”, and Bauman Moscow State Technical University.

This Conference is a biannual event with a thirty-year history. It was created by a well-known specialist in the field of control Konstantin Pupkov who headed several departments of automatic control systems at Bauman Moscow State Technical University, Moscow State Institute of Electronics and Mathematics and Peoples’ Friendship University of Russia. The Conference co-organizers have always been the departments of control systems of various Russian capital and regional universities.

I want to emphasize that the name of the Conference “Intelligent Systems” has not changed. Konstantin Pupkov initially determined the subject effectively, because even then he had a presentiment that this area would be relevant for decades ahead. Recently, after the decree of the President of the Russian Federation No. 490 of 2019 “On the development of artificial intelligence in the Russian Federation”, the term “artificial intelligence”, which is directly related to the subject of the Conference, has become very popular. Let me say that, according to my estimates, we are only at the beginning of the creation of artificial intelligence.



We should not forget about the educational mission of INTELS. For the entire thirty-year history of the Conference, it has been hosted by the leading universities of the Russian Federation in Moscow, St. Petersburg, Vologda, Vladimir, Krasnodar, Nizhny Novgorod and others. The Conference is traditionally attended by students, graduate students and young scientists, whose scientific level and professional future depend on the knowledge in control theory, optimization, and artificial intelligence.

Since 2016, in order to give the Conference a new impetus, it has acquired an international status, English has become its working language, and the proceedings have been indexed in SCOPUS and Web of Science. I hope that despite certain difficulties, we will be able to publish the proceedings of the current Conference, although foreign databases have become less relevant in accordance with the instructions of the Ministry of Science and Higher Education of the Russian Federation.

I am sure that this Conference will contribute to a productive exchange of experience, discussion of priority areas and problems in the field of artificial intelligence, as well as ways to solve them and will help to determine the prospects for in the coming years.

I wish the participants of the 15th International Conference “Intelligent Systems” (INTELS’22) fruitful work, new scientific achievements, and well-being!

*INTELS’22 General Chair
D. Sc., Prof. Askhat Diveev*

Dear Dear Colleagues!

Let me congratulate you on the opening of the 15th International Conference “Intelligent Systems” (INTELS’22). This Conference, formerly called the Symposium, has been held for thirty years. Our institute LETI hosted this Conference twice, the last time in 2018. Despite the fact that the theme of the Conference has not changed for thirty years, we understand how important research in this area is now for our country and for all mankind. Autonomous robots, unmanned quadrotors, underwater and ground vehicles are just learning to take their first steps. The main problem of creating these devices is the development of their automatic control systems in the direction of intellectualization, i.e. in the development of their brain or, more precisely, artificial intelligence, and this is the main topic of the Conference. We, the participants of INTELS’22, our students and followers, will have to train and put these autonomous devices on their feet, which will eventually lead to a new technological breakthrough, that, I hope, will significantly transform the whole world for the better. I wish all participants of the Conference fruitful work, new ideas inspired by scientific reports and pleasant communication!



*Rector of St. Petersburg Electrotechnical University “LETI”
D. Sc., Prof. Victor Sheludko*



15th International Conference «Intelligent Systems – 2022»

INFORMATION FOR PARTICIPANTS

THE EVENT WILL BE HELD IN A MIXED FORMAT

VENUE:

Opening Ceremony and Technical Sessions 1 and 2.1 on December 14, 2022 at the site of the Russian Academy of Sciences — 32a, Leninsky Prospekt
Passport is required.

Technical Session 3 Intelligent Systems in Robotics will be held at the Robotics Center of FRC CSC RAS — 42, Vavilova str. Passport is required.

Transfer to Robotics Center of FRC CSC RAS (42, Vavilova str.) will be organized for the participants of Technical Session 3 and guests. At registration desk please confirm the transfer if needed.

PARTICIPATION IN THE EVENT: BROADCAST

To join the broadcast you can through the Participant's Personal Account on the event website <https://intels.confreg.org/>. In order to create a Personal Account you need to register.

We use WEBINAR platform for broadcasts. To watch the broadcast on your phone, you will need to install the application. When connected, the system will prompt you to do so.

The connection may take up to 15 minutes. We would ask you to connect in advance!

ONLINE SPEECH:

To make a presentation, you need to upload your presentation to WEBINAR in advance. The presentation should be no more than 100 MB. If you have a video, you need to upload it separately in mp4 format to Webinar. The video should be no larger than 700 MB.

A separate connection link will be sent to speakers on the day of the event. Please check in early so we can get you on the air. The speaker independently launches the presentation and manages it at the time of the speech.

SPEECH IN PERSON:

Speakers hand in their presentation at the presentation reception desk. There is an equipment with a projection format of 4 * 3 in the hall.

Presenters will not be able to connect their laptops for presentation. All presentations should be submitted on a flash drive in pptx or pdf format.

INFORMATION FOR PARTICIPANTS

FOOD:

A coffee break, lunch and buffet will be organized for the participants at the venue.

The coffee break will be served next to the Blue Hall. Lunches will be organized in the dining room from 12.00 to 13.00.

You will receive a voucher for lunch at the registration desk.

Gala Dinner will take place in the Winter Garden — next to the hall.

CERTIFICATES OF PARTICIPATION:

Participant certificates and NMO codes will be posted in Personal Accounts not earlier than 20 days after the event

EVENT VIDEO RECORDINGS:

Video recordings of the event will be posted in Personal Accounts not earlier than one month after the event. Participants will be informed about it by separate mailing.

CONTACTS:

Ltd. Trialogue is the Technical partner of the event

Registration, technical issues of participation in the event, please, contact:

tel.: +7 (926) 848-23-58

e-mail: intels@confreg.org



15th International Conference «Intelligent Systems – 2022»

VENUE PLAN

МЕСТО ПРОВЕДЕНИЯ | VENUE:

Российская академия наук,
Москва, Ленинский проспект, 32а,
Russian Academy of Sciences,
32a, Leninsky Prospekt, Moscow, Russia

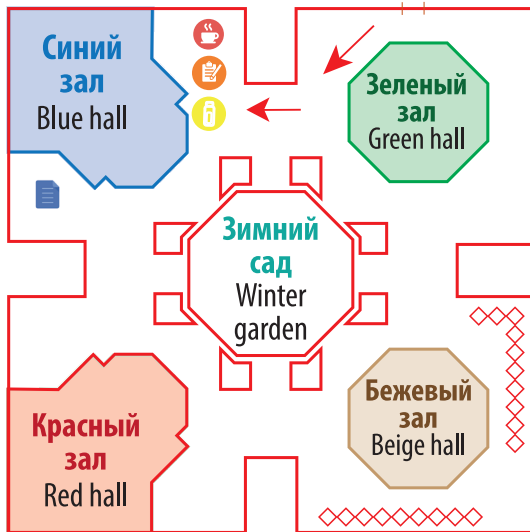
1 ПОДЪЕЗД | ENTRANCE 1

3 этаж, Синий зал |
3rd floor, Blue Hall

-1 ЭТАЖ 1st FLOOR

Гардероб, туалеты
Cloak-room, WC

3 ЭТАЖ 3rd FLOOR



1 ЭТАЖ 1st FLOOR

Вход, лифты
Entrance, elevators



РЕГИСТРАЦИЯ
REGISTRATION



ПОСТЕРНАЯ СЕССИЯ
POSTER SESSION



СБОР ПРЕЗЕНТАЦИЙ
PRESENTATION DESK



СТОЛОВАЯ
CANTEEN

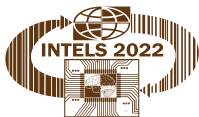


КОФЕ-БРЕЙК
COFFEE BREAK

15TH INTERNATIONAL CONFERENCE INTELLIGENT SYSTEMS 2022 DECEMBER 14 – 16, 2022

AGENDA

DAY 1 – 14 December 2022 (Wednesday)		DAY 2 – 15 December 2022 (Thursday)	
09:00 – 10:00 Registration	09:30 – 10:00 Poster Session		
10:00 Opening Ceremony		10:00 Technical Session 2.2 (online)	
10:15 – 11:45 Plenary Keynotes 1-2-3		13:30 – 14:00 Break	
11:45 Photo Session		14:00 Technical Session 2.3 (online)	
		16:30 – 17:00 Break	
12:00 – 13:15 LUNCH	12:00 – 12:45 Poster Session	17:00 Technical Session 2.3 (online)	
13:15 – 15:30 Technical Session 1	12:45 Transfer to Robotics Center (Vavilova str., 42)	19:30 Closing Ceremony	
15:45 – 17:15 Technical Session 2.1	13:15 – 18:30 Technical Session 3 (Vavilova str., 42)		
17:30 – 19:00 Technical Session 2.1	18:30 Transfer from Robotics Center to Dinner		
19:00 – 20:30 Gala Dinner RAS			



15th International Conference «Intelligent Systems – 2022»

**15TH INTERNATIONAL SYMPOSIUM INTELLIGENT
SYSTEMS 2022
DECEMBER 14 – 16, 2022**

TECHNICAL PROGRAM

DAY 1 – 14 December 2022 (Wednesday)	
10:00	Opening Ceremony
Keynote 1	
10:15	Prof. Sergey Zheltov RAS Member, State Research Institute of Aviation Systems (GosNIIAS), Moscow, Russia Prospects of Artificial Intelligence in Aviation
Keynote 2	
10:45	Prof. Vladimir Arlazarov Federal Research Center Computer Science and Control of the Russian Academy of Sciences, Moscow, Russia CEO Smart Engines Current Threats to the Security of Neural Network Models and Ways to Prevent Them
Keynote 3	
11:15	Prof. Yuri Mitrishkin M.V. Lomonosov Moscow State University, Faculty of Physics, Moscow, Russia V.A. Trapeznikov Institute of Control Sciences of Russian Academy of Sciences, Moscow, Russia Hierarchical cascade control systems for time-dependent dynamical plants as applied to magnetic plasma control in D-shaped tokamaks
11:45	Photo Session
12:00-13:15	LUNCH

DAY 1 — 14 December 2022 (Wednesday)

Technical Session 1 Numerical Methods for Intelligent Control Systems

Conveners:

Askhat Diveev (FRC CSC of RAS, Russia)

13:15	Avdeenko T. V., <u>Timofeeva A. Yu.</u> , Murtazina M. S. <i>online</i> Comparative analysis of feature extraction methods for intelligence estimation based on resting state EEG data
13:30	<u>Serov V. A.</u> , Voronov E. M., Dolgacheva E. L., Kosyuk E. Y. A Hybrid Trans-Dimensional Evolutionary Algorithm of Dynamical Systems Control Multi-Criteria Optimization
13:45	<u>Ulitin I. V.</u> , Barulina M. A., Velikanova M. G., Korolev A. Y., Kaluta T. Y., Glushakov I. A., Rahimov N. M., Fedonnikov A.S. Using the STEGO neural network for scintigraphic image analysis
14:00	<u>Klimenko A. B.</u> The system architecture and methods for efficient resource-saving scheduling in the fog
14:15	Kruzhkov V. I., Mitrishkin Y. V., Pavlova E. A. Real-time hardware identification of complex dynamical plant by artificial neural network based on experimentally processed data by smart technologies
14:30	Glushchenko A. I., <u>Zhukov P. I.</u> Implicit adaptation of mesh model of transient heat conduction problem to heated substance
14:45	<u>Osintseva E. A.</u> , Chimitova E. V. Optimal design of reliability experiment based on the Wiener degradation model under limitation for the degradation index
15:00	<u>Andrikov D. A.</u> , Kurbanov S. V. Automating the study of a linearized model of diabetes mellitus and tuning a PID controller for this model
15:15	Pavlova E. A., Mitrishkin Y. V., <u>Kruzhkov V. I.</u> LMI-Synthesis and analysis of plasma vertical position control systems in tokamak
END of Technical Session 1	
15:30-15:45	COFFEE-BREAK



15th International Conference «Intelligent Systems – 2022»

DAY 1 – 14 December 2022 (Wednesday)

Technical Session 2.1 Theoretical Foundation of Intelligent Systems

Conveners:

Oleg Korsun (GosNIIAS, Russia)

Elena Sofronova (FRC CSC of RAS, Russia)

15:45	Serov V.A., <u>Popova D.L.</u> , Rogalev P.P., Tararina A.V. Neuro-evolutionary synthesis of game models of control under uncertainty based on distributed computing technology
16:00	<u>Bakaev M. A.</u> , Khvorostov V. A. Quality of labeled data in machine learning: Common sense and the controversial effect for user behavior models
16:15	<u>El-Khatib S. A.</u> , Skobtsov Y. A., Rodzin S. I. Exponential particle swarm optimization method for complexly structured images segmentation
16:30	<u>Melnikov A.</u> , Levin I., Dordopulo A., Slasten L. Evaluation of advanced computer technologies for calculation of exact approximations of statistics probability distributions
16:45	Shichkina Y. A., <u>Fatkieva R. R.</u> , Isaenko N. N. Monitoring the condition of a patient with Parkinson's disease
17:00	Grishina L. S., Bolodurina I. P., Shukhman A. E., <u>Legashev L. V.</u> , Zhigalov A. Yu. Extracting and processing of Russian unstructured clinical texts for a medical decision support system
17:15-17:30	COFFEE-BREAK
17:30	Korsun O. N., Poliyev A. V., <u>Stulovskii A. V.</u> Aircraft optimal control for longitudinal maneuvers using population-based algorithm
17:45	Mandrikova O., Polozov Y., <u>Mandrikova B.</u> <i>online</i> Natural data analysis method based on wavelet filtering and NARX neural networks
18:00	<u>Kuzmin V. R.</u> , Vorozhtsova T. N., Massel L. V. Design and development of information and computational system for energy facilities' impact assessment on environment

DAY 1 — 14 December 2022 (Wednesday)

18:15	<u>Klevanskiy N. N.</u> , <u>Glazkov V. P.</u> , <u>Saparov Ye. K.</u> , <u>Mavzovin V. S.</u> From matryoshka and Fukuruma to hierarchies of criteria and ranking methods in multi-criteria problems of analysis and decision-making
18:30	<u>Du Kehao</u> , <u>Bobkov A. V.</u> An overview of object detection and tracking algorithms
18:45	<u>Proletarsky A. V.</u> , <u>Neusypin K. A.</u> , <u>Selezneva M. S.</u> Modern intelligent control systems: theory and implementation
END of Technical Session 2.1	
Technical Session 3 Intelligent Systems in Robotics	
<i>Conveners:</i> <i>Igor Prokopyev (FRC CSC of RAS, Russia)</i> <i>Anna Daryina (FRC CSC of RAS, Russia)</i>	
13:15	<u>Bureneva O. I.</u> <i>online</i> , <u>Mironov S. E.</u> , <u>Safyannikov N. M.</u> , <u>Sukhinets Zh. A.</u> Functional converter for intelligent sensor and its layout design
13:30	<u>Krivsha N.</u> , <u>Krivsha V.</u> , <u>Butenkov S.</u> Fuzzy granular approach for the non-homogeneous object images semantic segmentation
13:45	<u>Bereznev V. A.</u> Optimality conditions for the principle of trajectories dividing
14:00	<u>Litunenko E. G.</u> , <u>Gruzlikov A. M.</u> , <u>Kolesov N. V.</u> , <u>Skorodumov Yu. M.</u> Mathematical model of information exchange in the autonomous underwater vehicle network
14:15	<u>Zhou Ruiyang</u> , <u>Neusypin K. A.</u> <i>online</i> ADRC-based UAV control scheme for automatic carrier landing
14:30	<u>Daryina A. N.</u> , <u>Prokopyev I. V.</u> Active simultaneous localization and mapping method based on model prediction
14:45-15:15	COFFEE-BREAK
15:15	<u>Malyshev D.</u> , <u>Rybak L.</u> , <u>Gaponenko E.</u> , <u>Voloshkin A.</u> <i>online</i> Algorithm for determining the singularity-free and interference-free workspace of a robotic platform for fruit harvesting



15th International Conference «Intelligent Systems – 2022»

DAY 1 – 14 December 2022 (Wednesday)

15:30	Shmalko E. Yu., <u>Rumyantsev Yu. A.</u> <i>online</i> Synthesis of a feedback controller by the network operator method for a mobile robot Rosbot in Gazebo environment
15:45	Khalapyan S., <u>Rybak L.</u> , Nozdracheva A., Semenenko T. <i>online</i> Convolutional neural network application to automate the process of aliquoting biosamples
16:00	<u>Mamchenko M. V.</u> , Volf D. A., Jharko E. F. Control of unmanned vehicles in smart cities using a multi-modal brain-computer interface
16:15	<u>Khodos A.</u> , Panteleyev M. Supervised learning in virtual soccer formation recognition
16:30	Bykov N., <u>Fedulov V.</u> Computer simulation of anti-drone system
16:45-17:00	COFFEE-BREAK
17:00	<u>Muslimov T.</u> Particle swarm optimization for target encirclement by a UAV formation
17:15	Kosyanchuk V., Selvesyuk N., Zybin E., <u>Novikov V.</u> , Olenev V., Solovyov A., Semyonov M. Application of a deterministic optical network model for the implementation of an expert system knowledge base for the information transmission failure management
17:30	Gorkavyy M. A., Ivanov Y. S., Sukhorukov S. I., Zhiganov S. V., Melnichenko M. A., Gorkavyy A. I., <u>Grabar D. M.</u> Collaborative robotic complex efficiency improving: an approach to the intellectualization of the control system
17:45	<u>Andriyanov N.</u> Deep learning for detecting dangerous objects in X-rays of luggage
18:00	Antonov A., Laryushkin P., <u>Fomin A.</u> <i>online</i> Kinematic analysis of a novel 5-DOF Delta-type parallel robot
18:15	<u>Ivanov Y. S.</u> , Zhiganov S. V., Gorkavyy M. A., Sukhorukov S. I., Grabar D. M. Using an ensemble of deep neural networks to detect human keypoints in the workspace of a collaborative robotic system
END of Technical Session 3	

DAY 1 — 14 December 2022 (Wednesday)

POSTER SESSION

9:30 — 10:00

12:00 — 12:45

TS 1 ID 61	<u>Gabdrakhmanova Nailia</u> , <u>Pilgun Maria</u> Time series analysis in neural network and mathematical models to detect social tension in the urban environment
TS 1 ID 84	<u>Kozhanova E. R.</u> , <u>Danilov S. I.</u> , <u>Belyaev V. V.</u> Methods of recognition based on wavelet transform for analysis of characteristics of spherical quantum dot
TS 2 ID 86	<u>Dorofeev N.</u> , <u>Grecheneva A.</u> Intelligent gait data processing algorithm based on mobile phone accelerometer
TS 2 ID 95	<u>Belyaev V. V.</u> , <u>Chausov D. N.</u> , <u>Solomatin A. S.</u> , <u>Kumar S.</u> , <u>Swamynathan K.</u> , <u>Margaryan H. L.</u> , <u>Hakobyan N. G.</u> , <u>Kuchero R. N.</u> , <u>Ermakova M. V.</u> , <u>Tsareva E. N.</u> Estimation of electron mobility in materials of organic electronics taking into account intramolecular and intermolecular interactions
TS 2 ID 96	<u>Tureshbaev A. T.</u> , <u>Omarova U. Sh.</u> , <u>Myrzayev R. S.</u> On the stability of collinear libration points in the three -body problem with two radiating masses
TS 2 ID 108	<u>Sofronova E.A.</u> Evolutionary Algorithm for Optimal Control of Traffic Flow
TS 3 ID 57	<u>Zatsarinnyy A. A.</u> , <u>Shabanov A. P.</u> Methodological approach to controlling the degree of intentions about novel knowledge for the digital economy
TS 3 ID 88	<u>Margaryan H.</u> , <u>Pokhsraryana D.</u> , <u>Hakobyan N.</u> , <u>Gasparyan P.</u> , <u>Hovhannisyan D.</u> , <u>Chilingaryan H.</u> , <u>Belyaev V.</u> , <u>Kuznetsov M.</u> Platform for real time spectroscopy based on NI-sbRIO system for optimal control of materials properties
TS 3 ID 92	<u>Prokopiev I. V.</u> , <u>Diveev A. I.</u> , <u>Shmalko E. Yu.</u> Autonomous navigation of a mobile robot assisted by its identified neural network model



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DAY 2 – 15 December 2022 (Thursday)

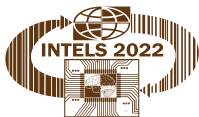
Technical Session 2.2 (online) Theoretical Foundation of Intelligent Systems

Conveners:
Askhat Diveev (FRC CSC of RAS, Russia)
Evgeny Atamas (MSU, Russia)

10:00	Massel L. V., <u>Massel A. G.</u> , Mamedov T. G. Integration of mathematical and cognitive modelling in the software
10:15	Massel L. V., <u>Massel A. G.</u> , Shchukin N. I., Tsybikov A. R. Designing a digital twin of a wind farm
10:30	Fazilov Sh. Kh., Mirzaeva O. N., <u>Radjabov S. S.</u> , Mirzaeva G. R. Construction of a recognition algorithm based on the assessment of the interdependence between local elements of the face image
10:45	<u>Eze T. U.</u> , Bekeneva Ya. A. Improved social network user recommendation system – the machine learning approach
11:00	Diveev A. I., <u>Shmalko E. A.</u> Additional requirement in the formulation of the optimal control problem for applied technical systems
11:15	<u>Yurchenkov A. V.</u> , Kustov A. Yu. Anisotropy-based estimation for sensor network with non-centered disturbance
11:30	<u>Devyatkin D. D.</u> , Trenev I. S. Data generation with variational autoencoders and generative adversarial networks
11:45	<u>Trenev I. S.</u> , Devyatkin D. D. Feedback linearization control of nonlinear system
12:00	<u>Ushakov Yu.</u> , Ushakova M., Legashev L. Research of a virtual infrastructure network with hybrid software-defined switching
12:15	<u>Denisov S. A.</u> , Kondrashev V. A., Zatsarinnyy A. A. Dynamic job queues management for interactive and batch computations on HPC system

DAY 2 – 15 December 2022 (Thursday)

12:30	<u>Volovich K. I.</u> , Denisov S. A., Zatsarinnyy A. A. Providing high-speed data access for parallel computing in the HPC cluster
12:45	Levina A., <u>Bolozovskii R.</u> Application of neural networks to power analysis
13:00	<u>Beknazaryan A.</u> Expressive power of binary and ternary neural networks
13:15	<u>Rybakov I.</u> , Yurkov N., Grishko A., Kochegarov I., Goryachev N. Multi-criteria assessment of the technical level of complex system based on the formation of the Fishburn value function of its unit estimated indicators
END of Technical Session 2.2 (online)	
13:30-14:00	BREAK
Technical Session 2.3 (online) Theoretical Foundation of Intelligent Systems	
<i>Conveners: Askhat Diveev (FRC CSC of RAS, Russia)</i>	
14:00	Chervontsev M., <u>Subbotin A.</u> , Vodyaho A., Zhukova N. Use of dynamic models in cognitive cyber-physical systems
14:15	<u>Nguyen Van Lam</u> Axisymmetric bodies of minimum resistance in a rarefied gas
14:30	<u>Barulina M.</u> , Gergenreter Yu., Zakharova N., Maslyakov V., Fedorov V., Ulitin I. Predictive diagnosis of breast cancer based on cytokine profile
14:45	<u>Karaseva S. A.</u> , Papunin A. V., Belyakov V. V., Makarov V. S., Malahov D. Yu. Structural analysis of hydrodynamical interaction of full-submerged Archimedes screws of rotary-screw propulsion units of snow and swamp-going amphibious vehicles with water area by methods of computer simulation
15:00	Levina A., Plotnikov A., <u>Ashmarov E.</u> New class of attack on hash function SHA-256



15th International Conference «Intelligent Systems – 2022»

DAY 2 – 15 December 2022 (Thursday)

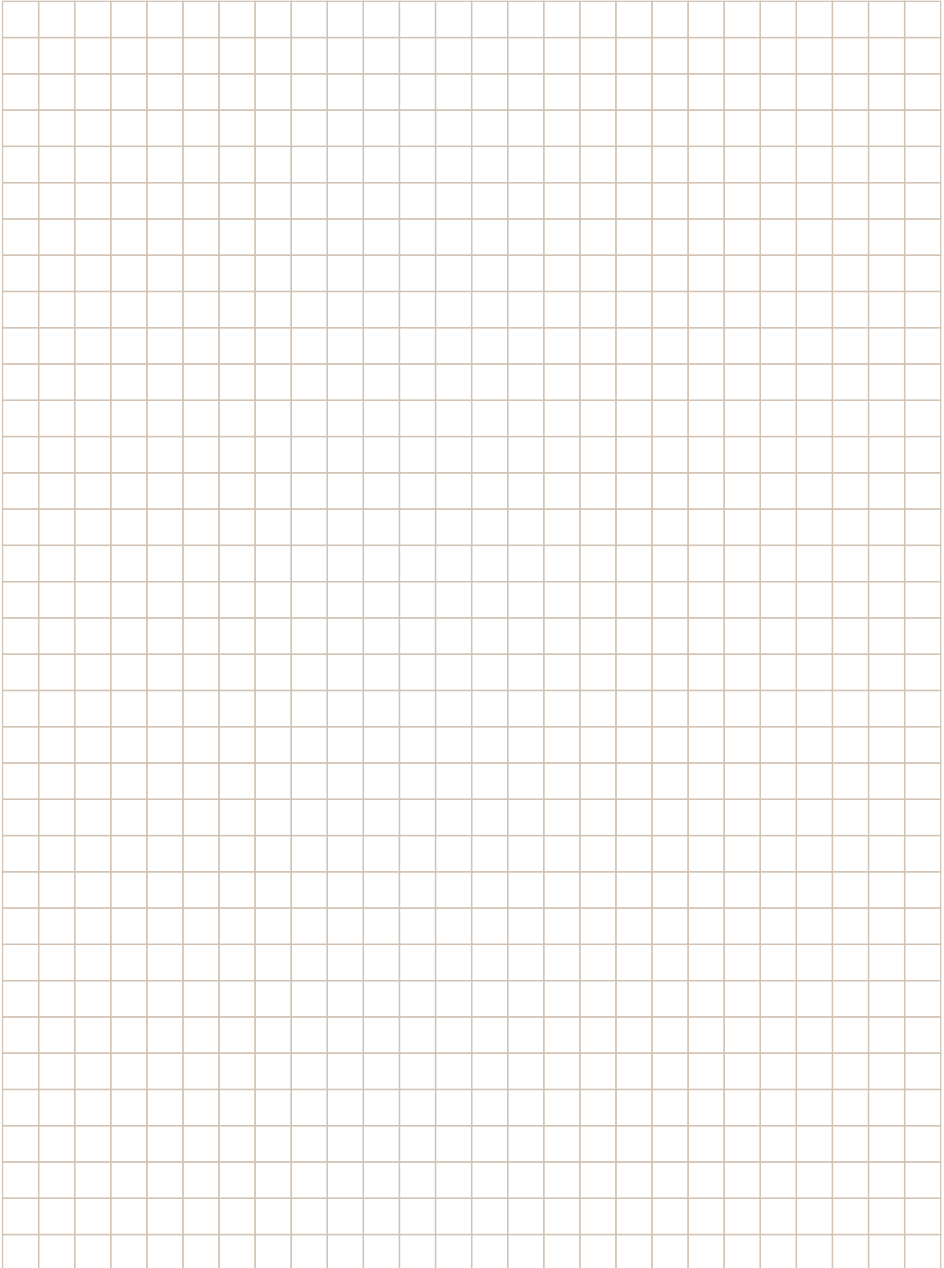
15:15	<u>Morozov S. M.</u> , Kupriyanov M. S. Neuro-fuzzy system for power supply control
15:30	Avdeenko T. V., <u>Serdyukov K. E.</u> Modified evolutionary test data generation algorithm based on dynamic change of fitness function weights
15:45	Gaskova D. A., Galperova E. V. Decision support in the analysis of cyber situational awareness of energy facilities
16:00	Kashevnik A., <u>Ammar Ali</u> Light-weight 2D map construction of vehicle environment using semi-supervised depth estimation approach
16:15	<u>Tolmanova V. V.</u> , Andrikov D. A. A review of engineering techniques for EEG processing
16:30-17:00	BREAK
17:00	<u>Ganshin A. S.</u> , Andrikov D. A. Robust system of algorithms for the functioning of biocompatible artificial liver devices
17:15	Fazilov S. K., <u>Urinov E. M.</u> , Radjabov S. S., Rashidov K. S. Face detection under partial occlusion by statistical analysis of local features
17:30	<u>Serov V. A.</u> A hierarchical model of vector Nash equilibrium search in a control problem under conflict and uncertainty
17:45	<u>Smolin V.</u> , Sokolov S. AGI's hierarchical component approach to unsolvable by direct statistical methods complex problems
18:00	Mirzaev N. M., Rasulmukhamedov M. M., <u>Mirzaev O. N.</u> , Baratov J. R. Construction of statistical recognition algorithms based on two-dimensional threshold functions
18:15	Mirzaev N., Ibragimova S., Nurmukhamedov T., <u>Meliev F.</u> , Mirzaeva G. A family of recognition algorithms based on the construction of k-dimensional threshold rules

DAY 2 – 15 December 2022 (Thursday)

18:30	Fazilov Sh., Radjabov S., Ibragimova S., Akimishev G., <u>Meliev F.</u> Model of recognition algorithms based on the selection of two-dimensional representative pseudo-objects in the training set
18:45	Fomin I.S., Rezets U.A., Smirnova E. Yu. Anomaly detection on video by detecting and tracking feature
19:00	Serov V.A., Dolgacheva E.L., Kosyuk E.Y., <u>Popova D.L.</u> , Rogalev P.P., Tatarina A.V. Artificial neural networks multi-criteria training based on graphics processors
19:15	Diveev A. I., Sofronova E. A., Konyrbaev N. B., Bexeitova A. B. Stabilization of movement along optimal trajectory
END of Technical Session 2.3	
19:30	Closing Ceremony

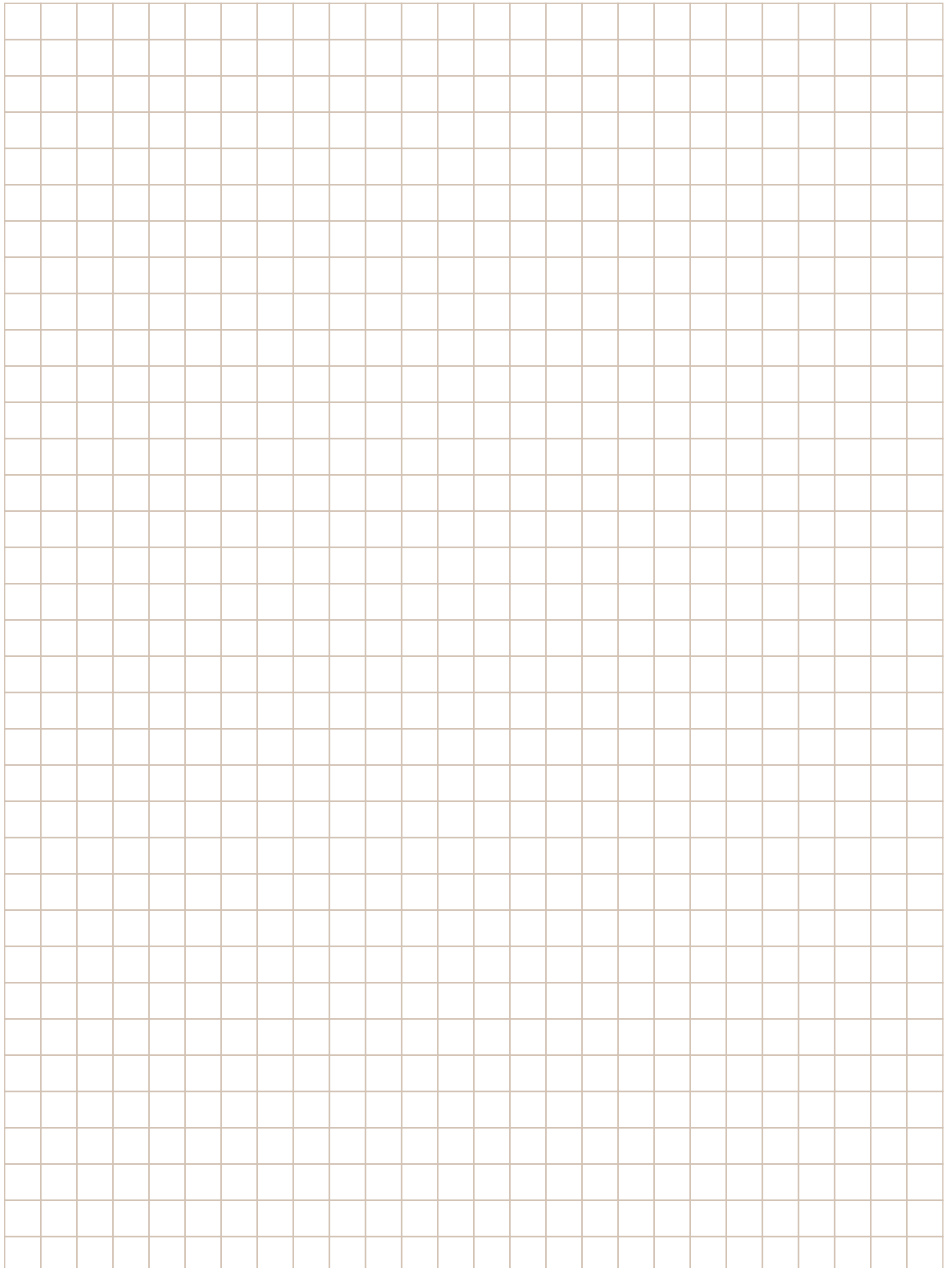


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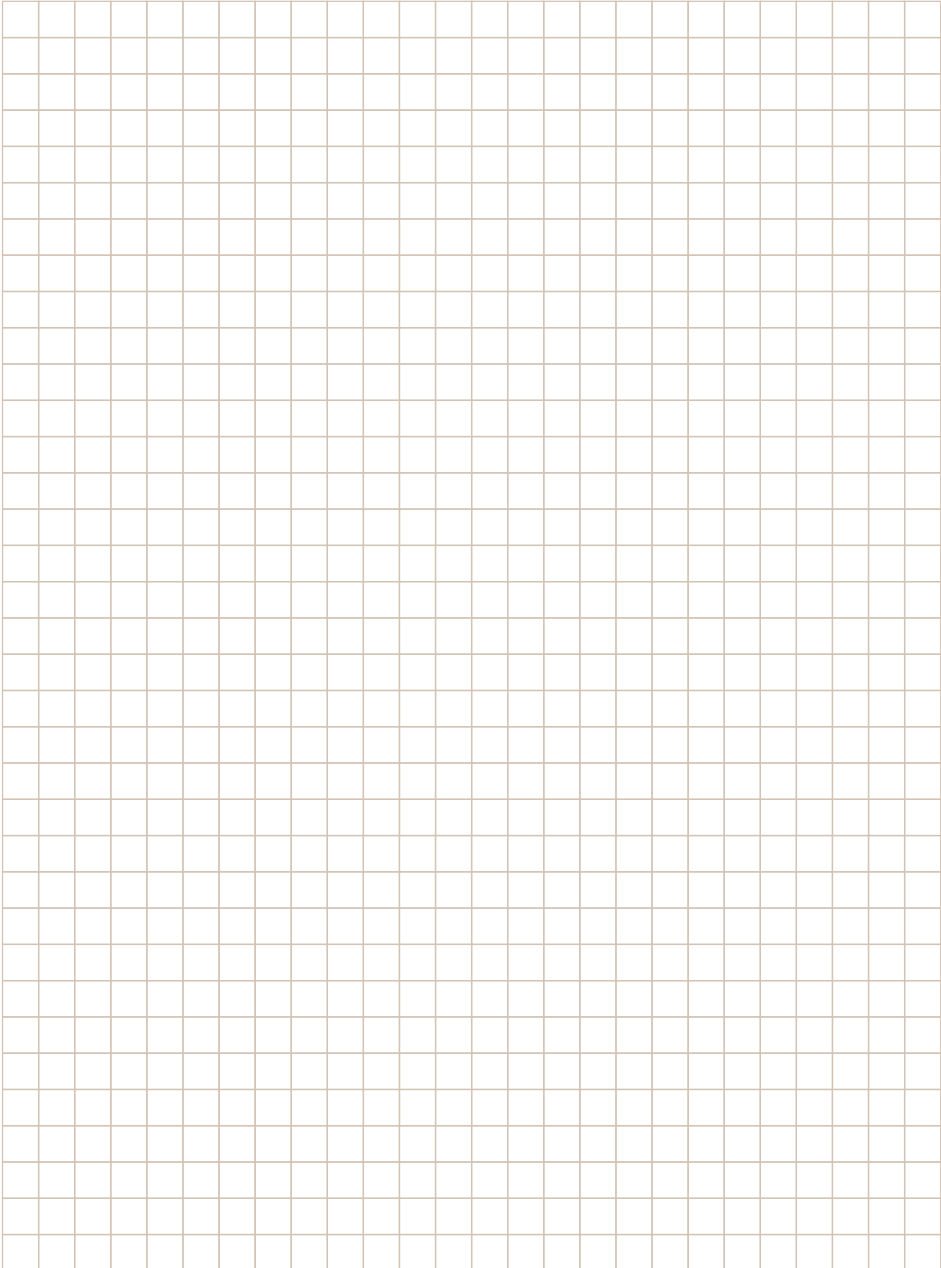


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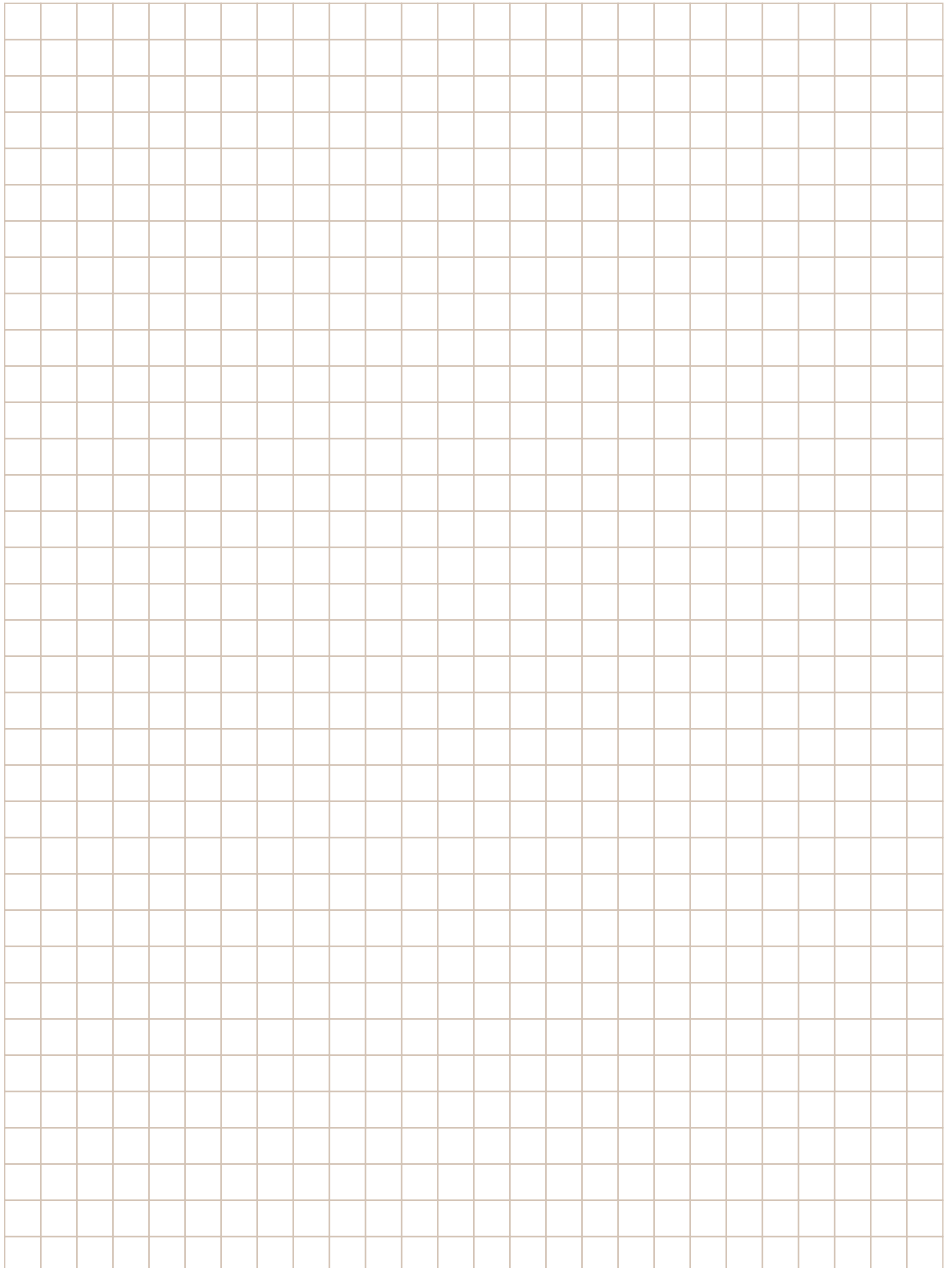


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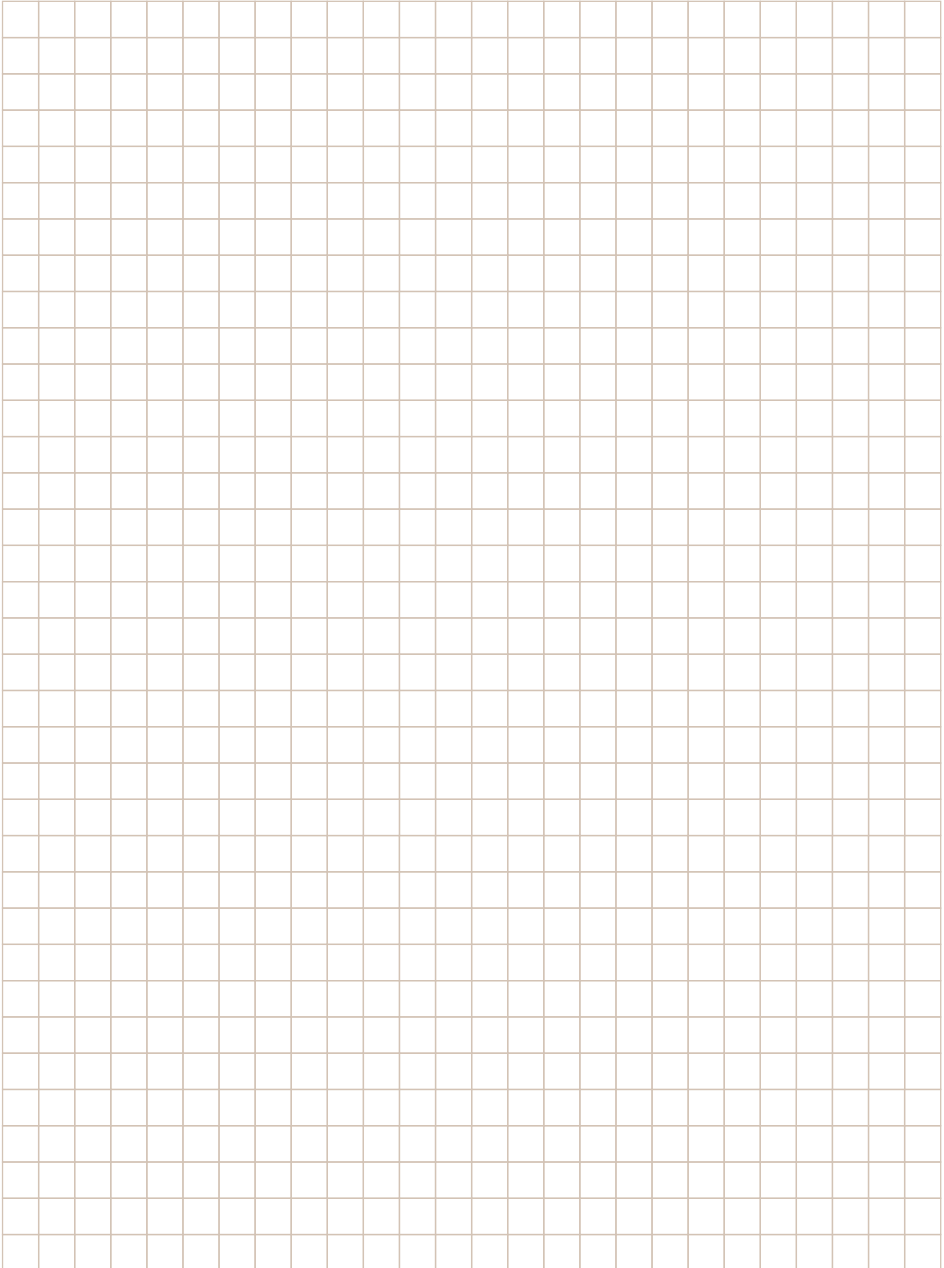


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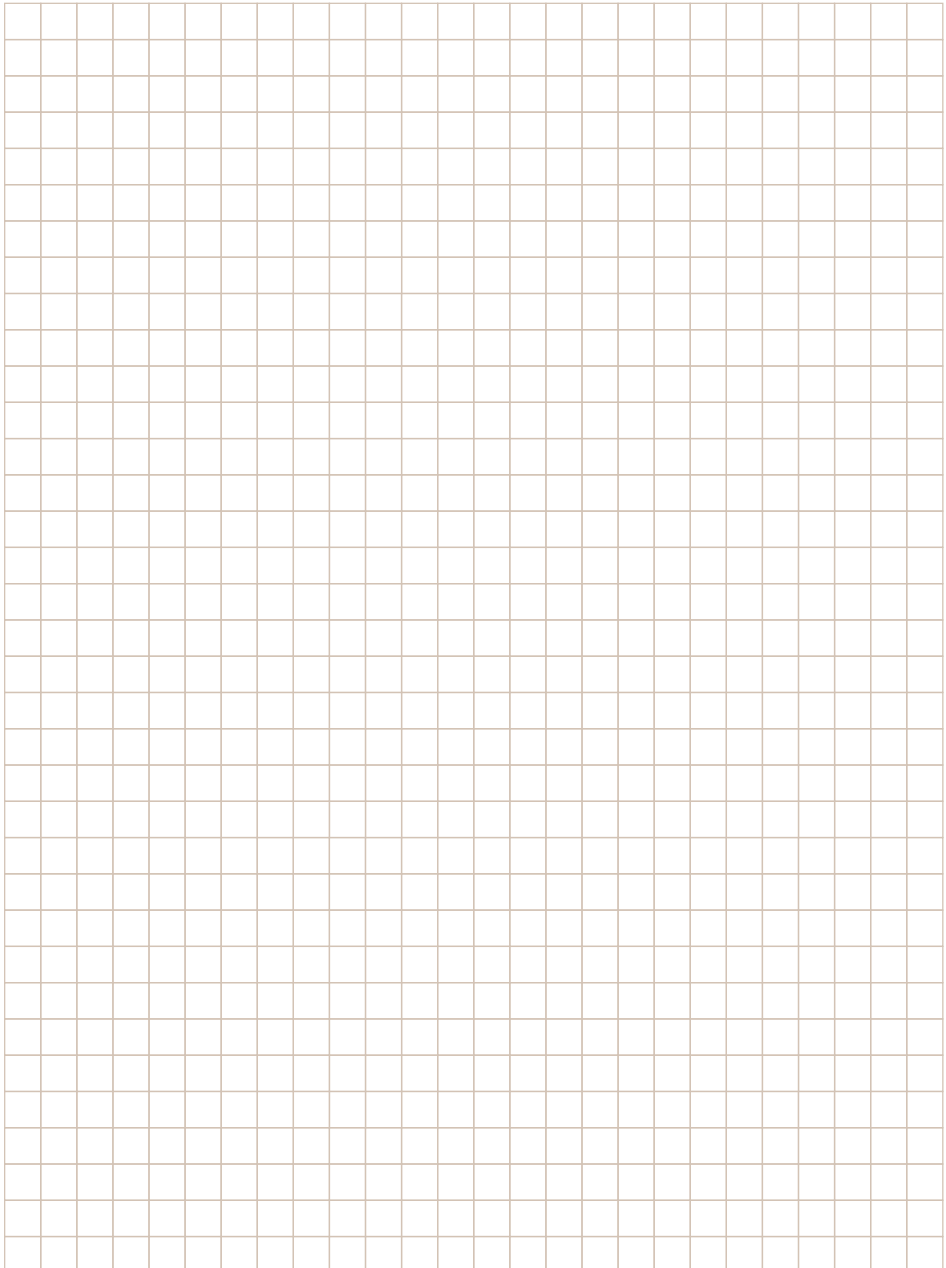


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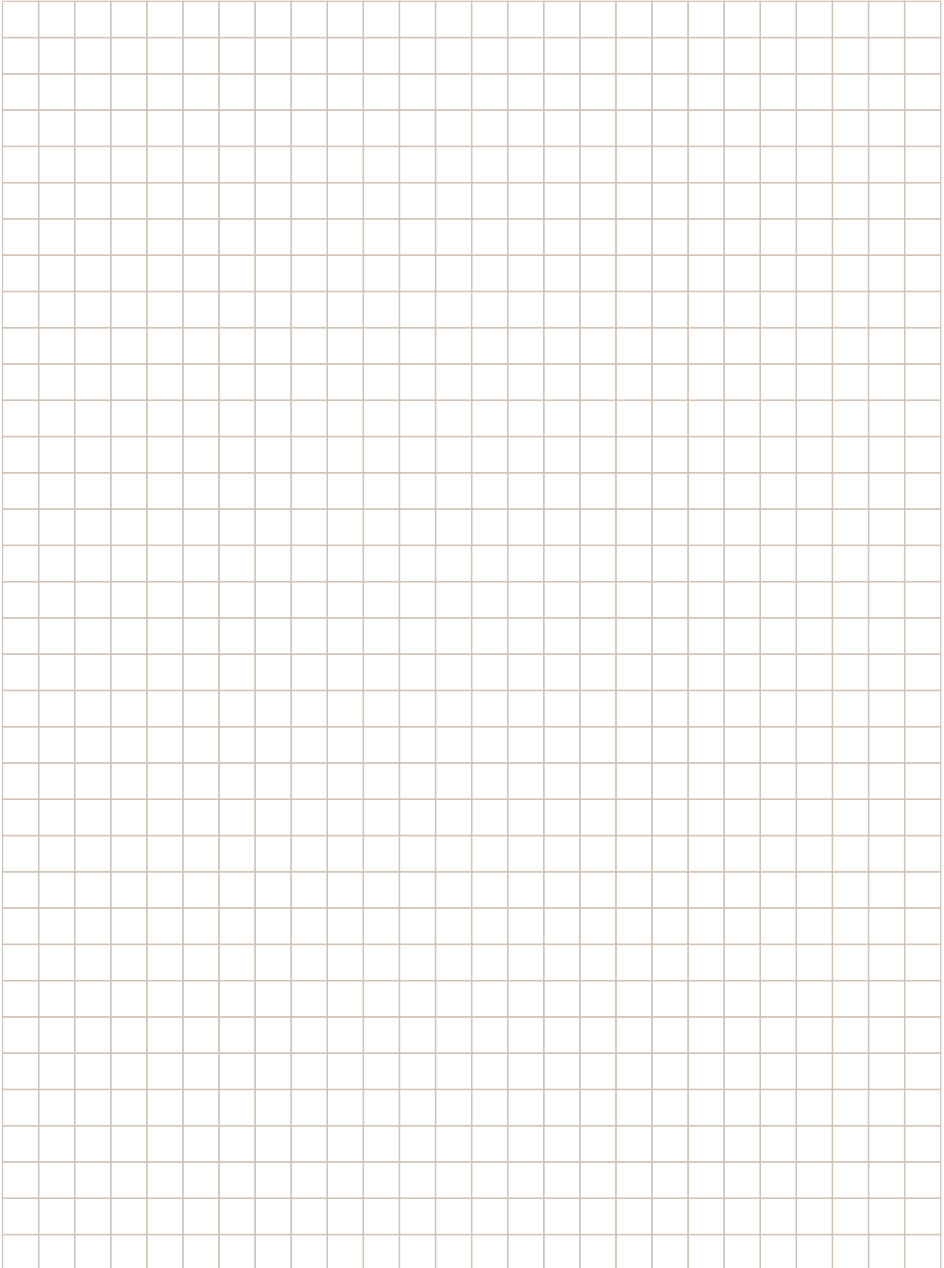


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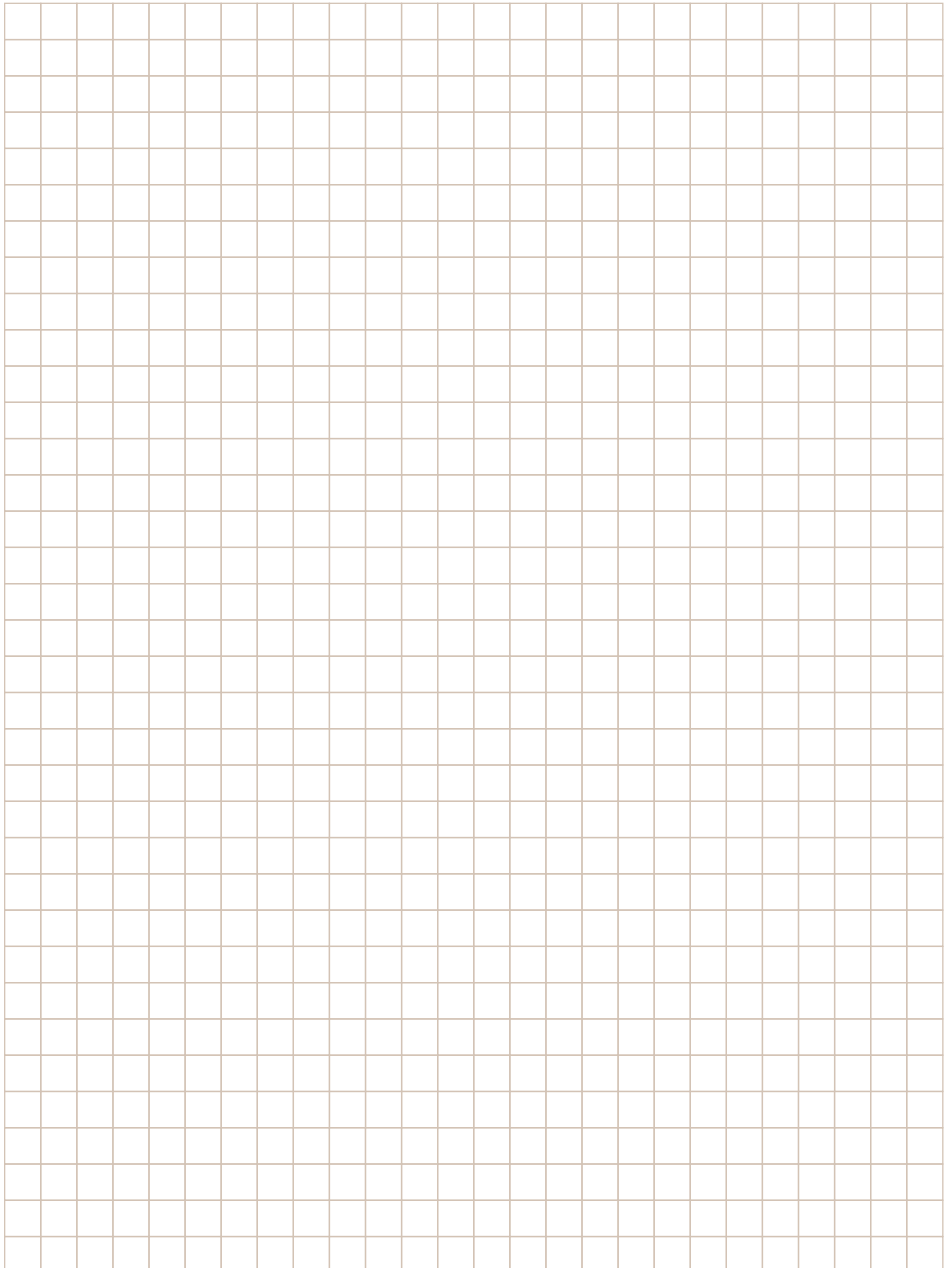


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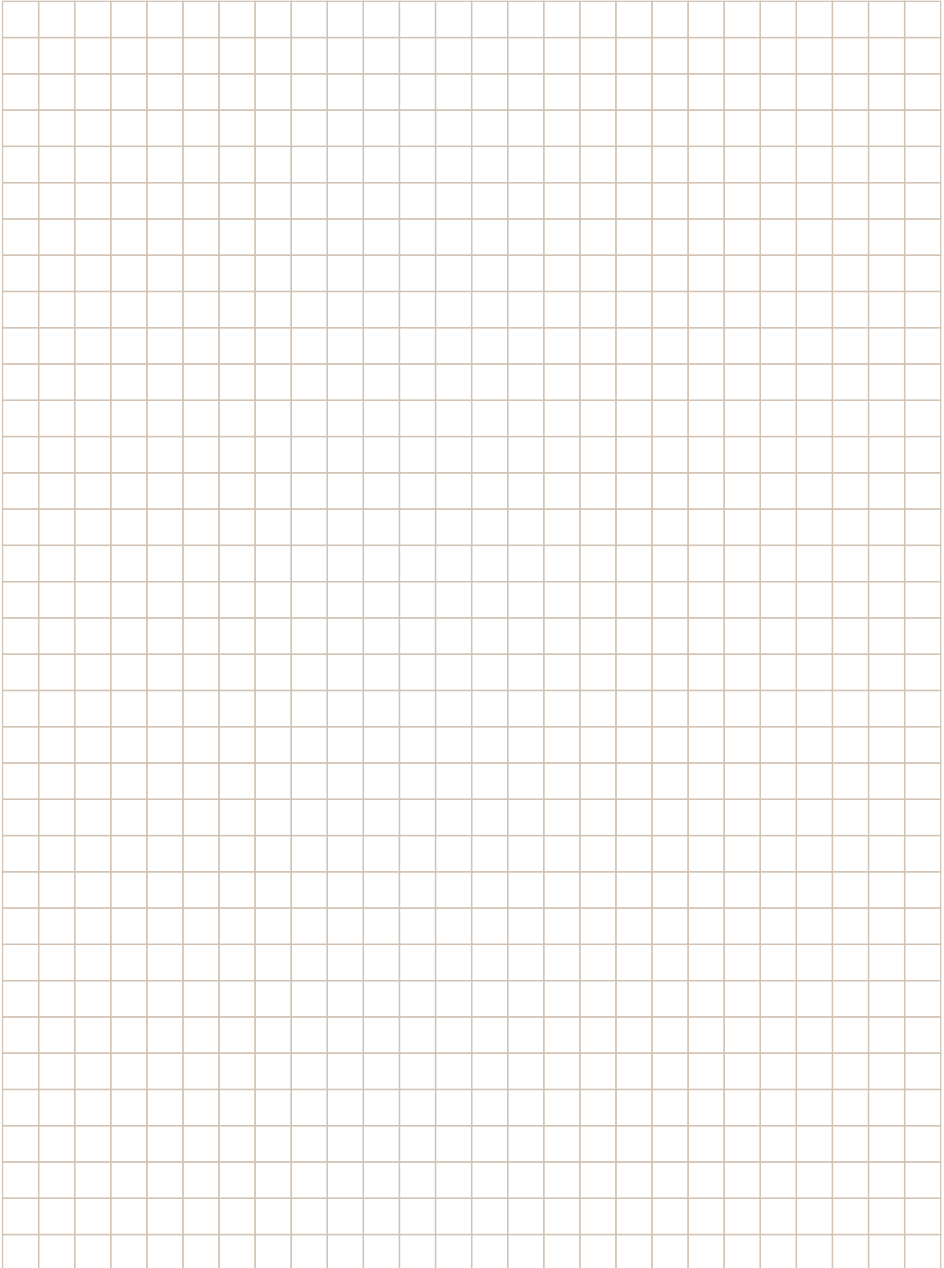


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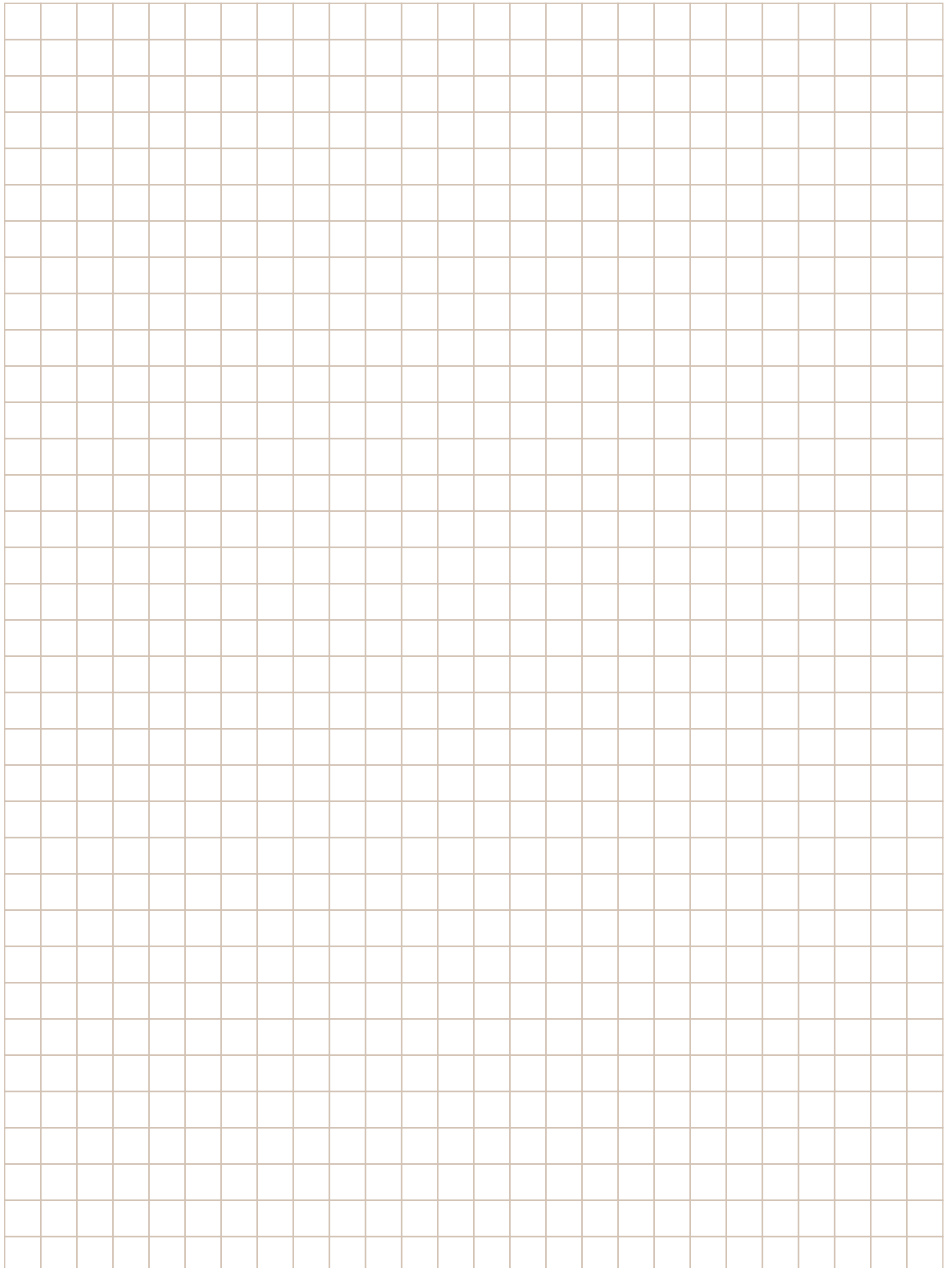


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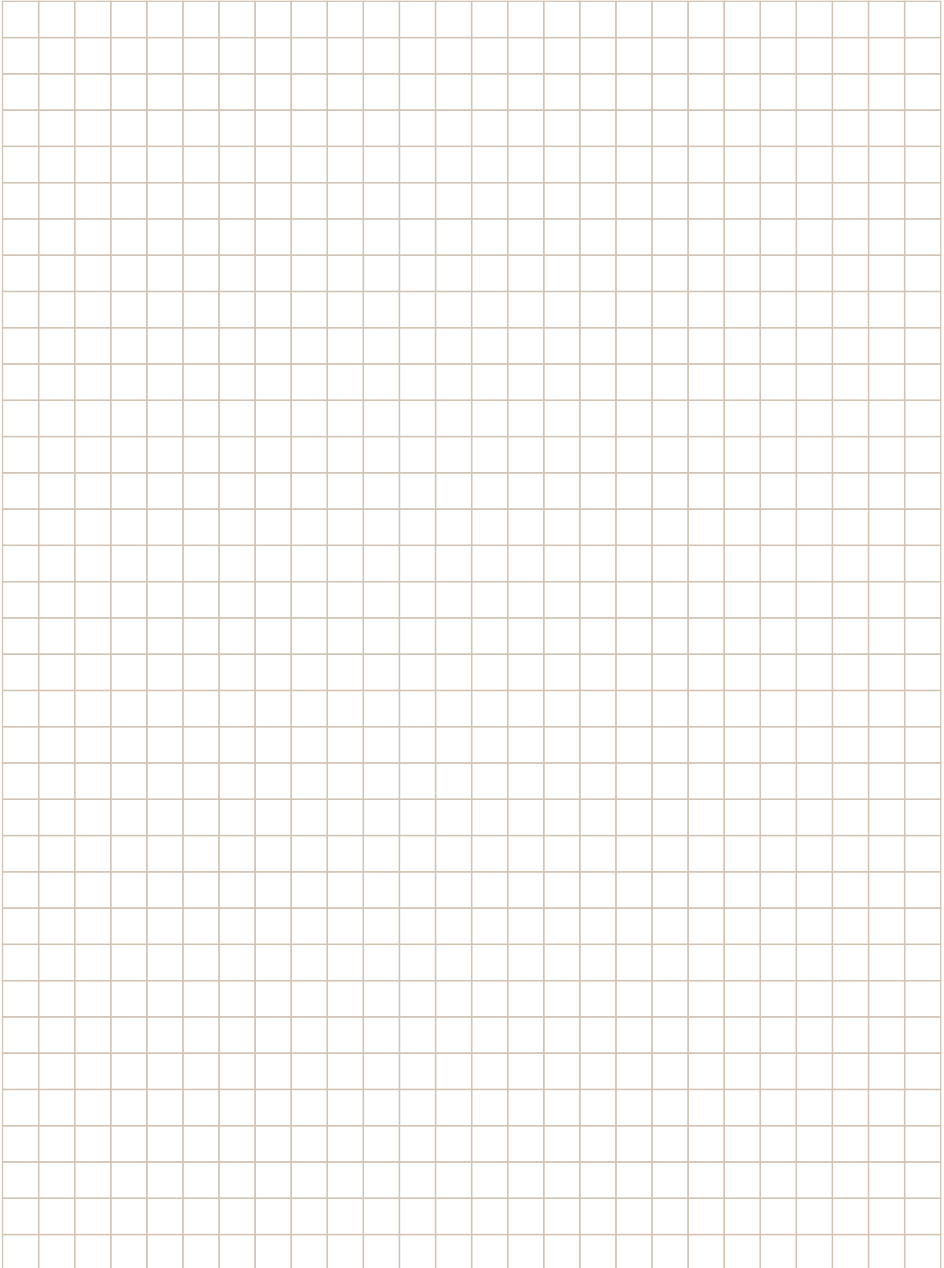


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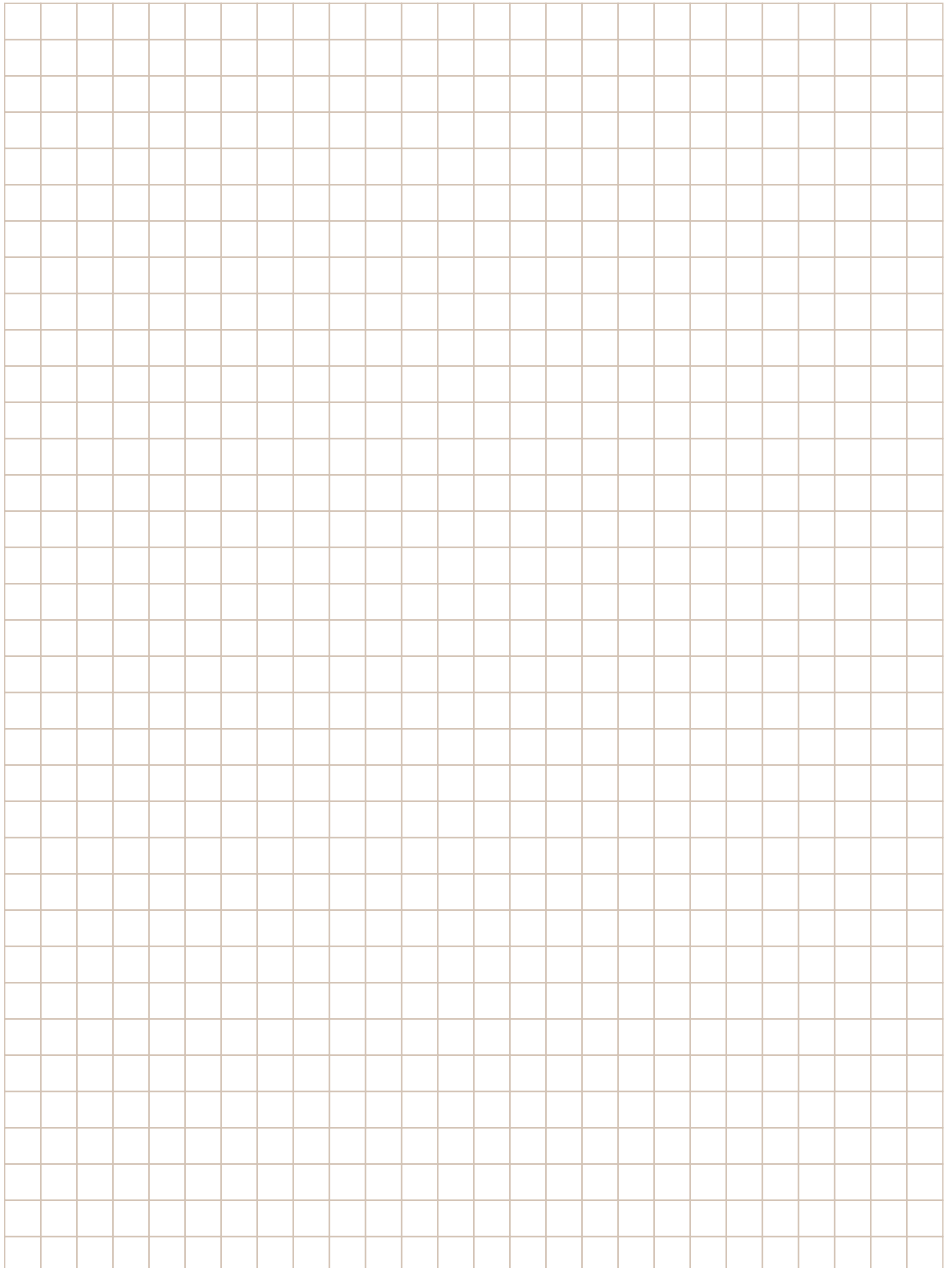


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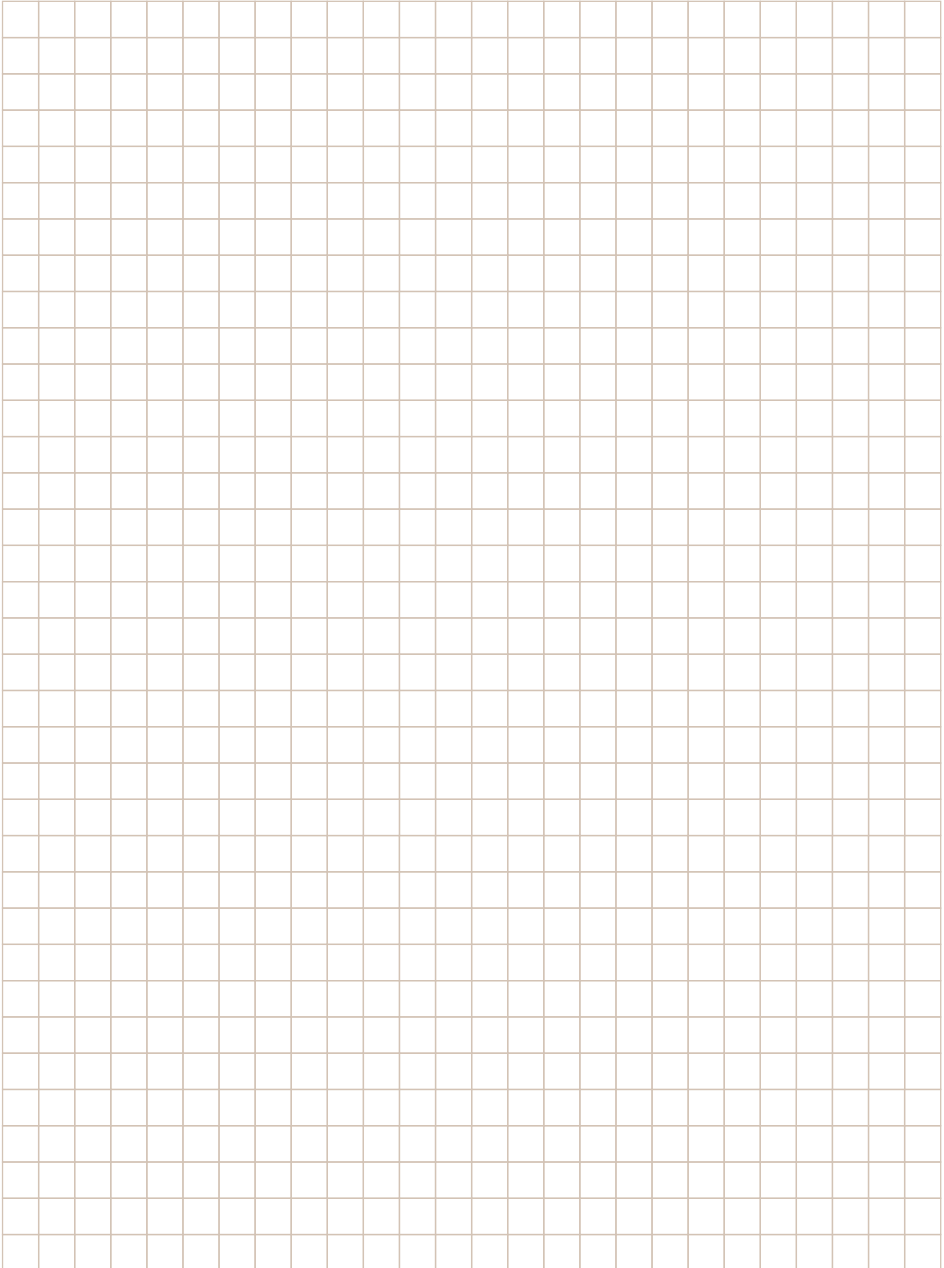


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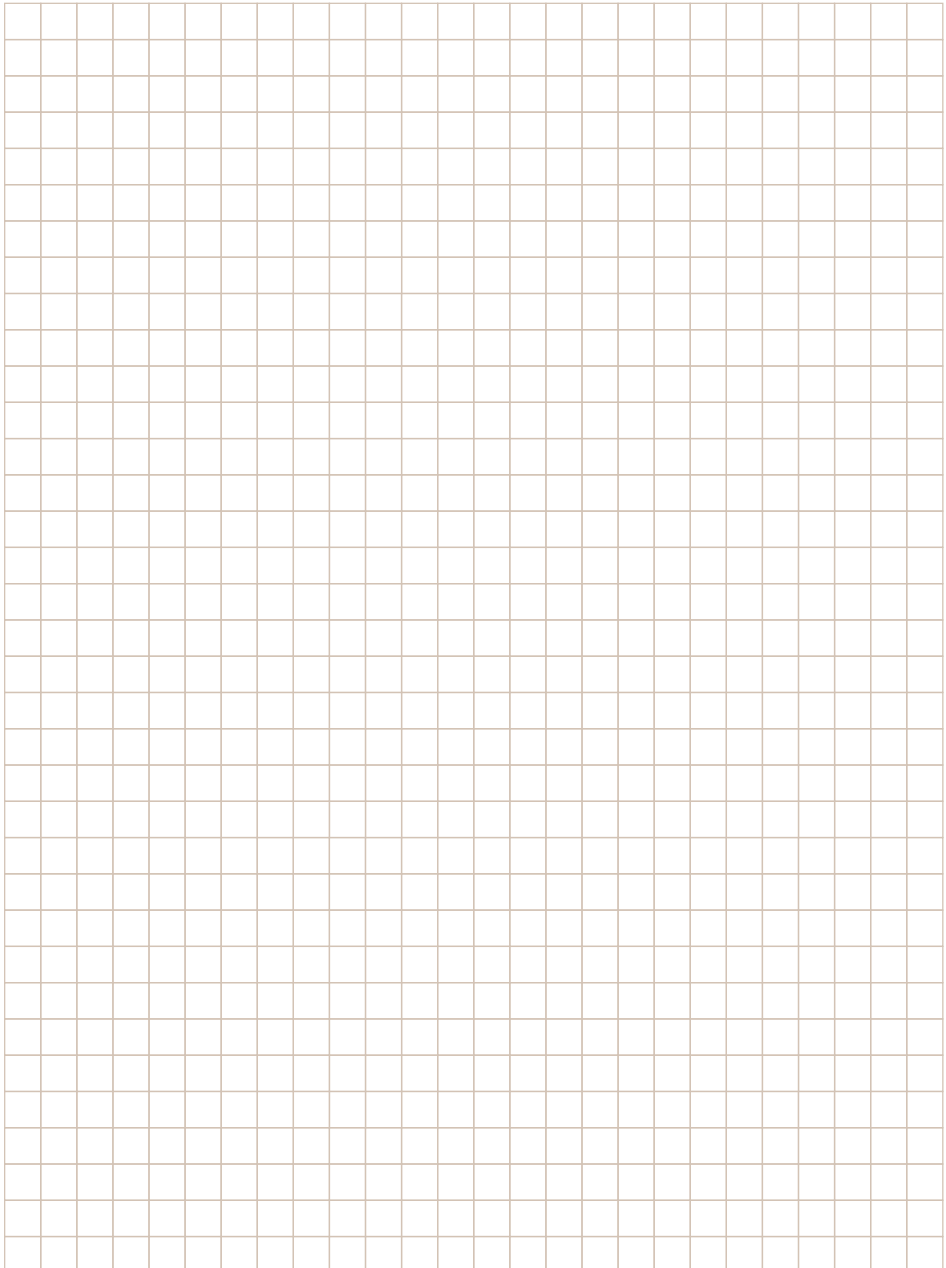


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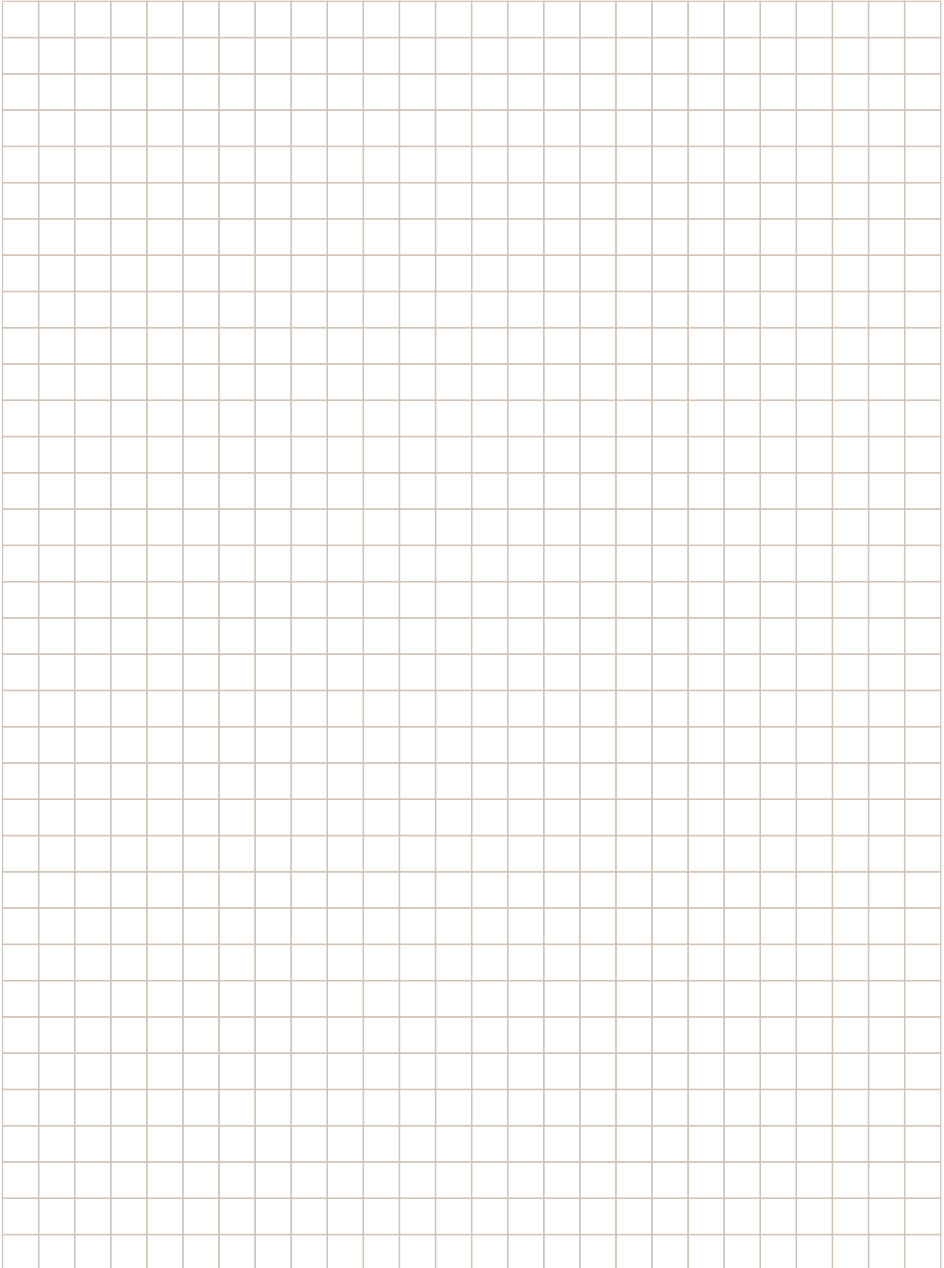


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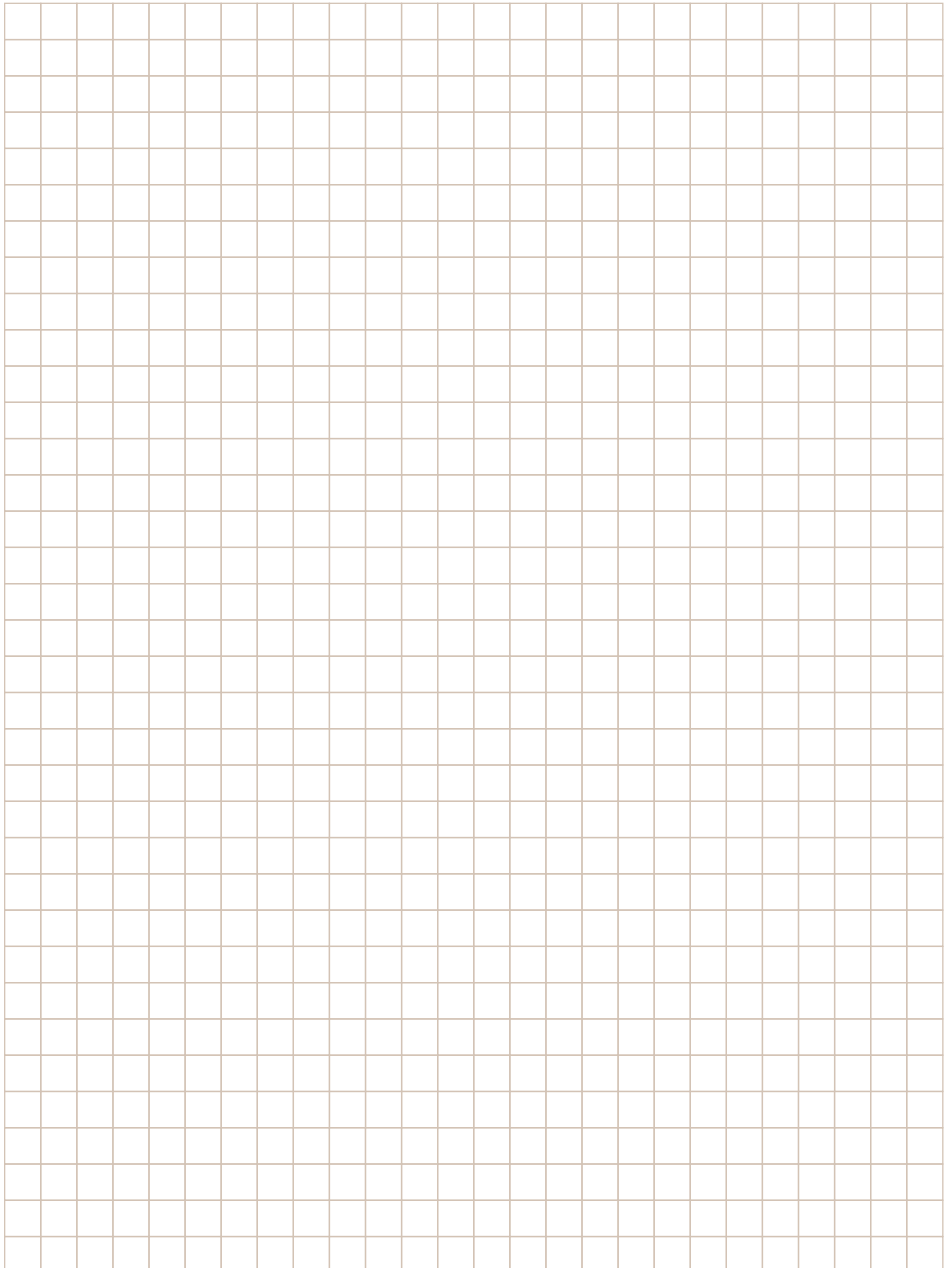


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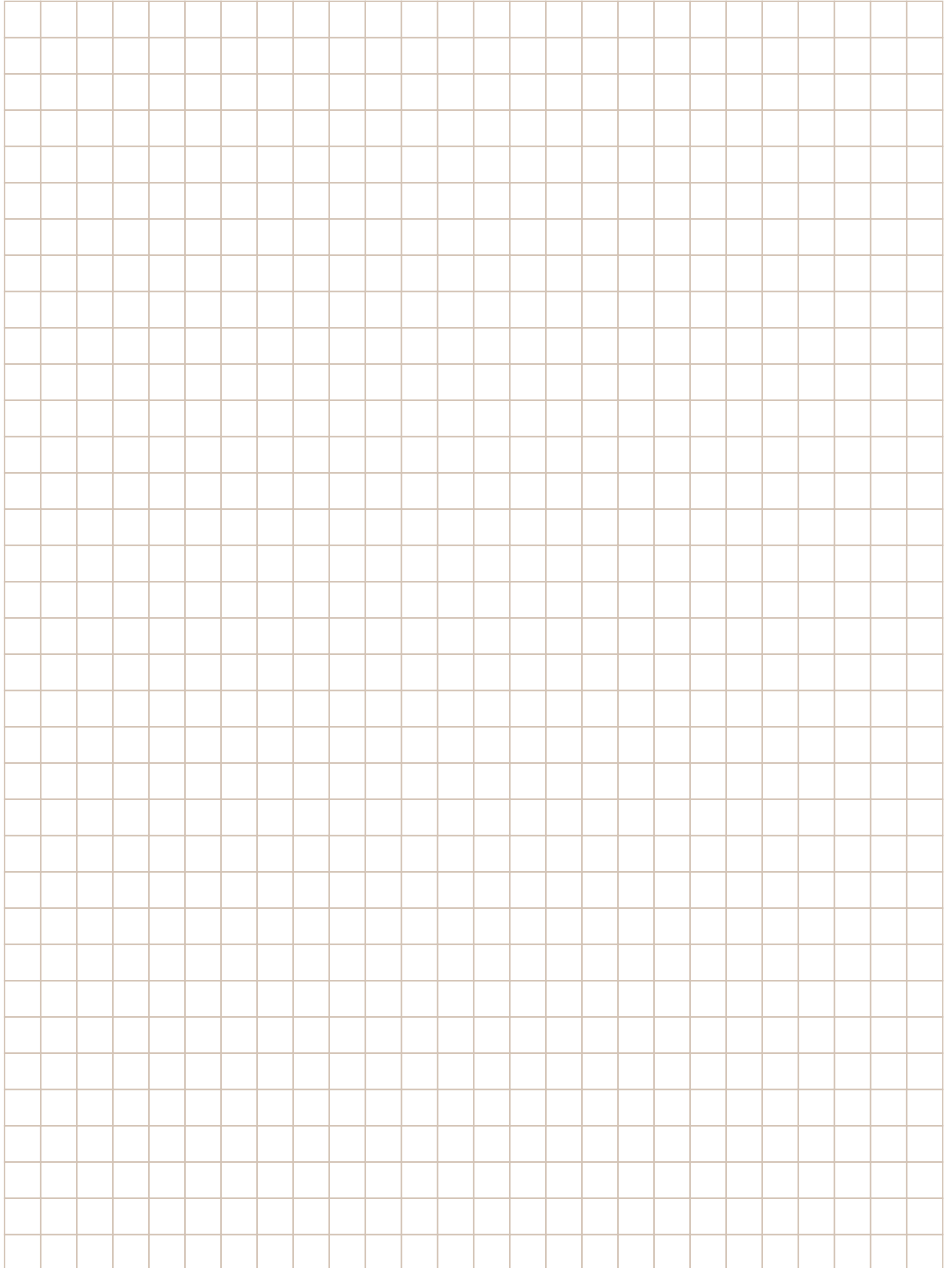


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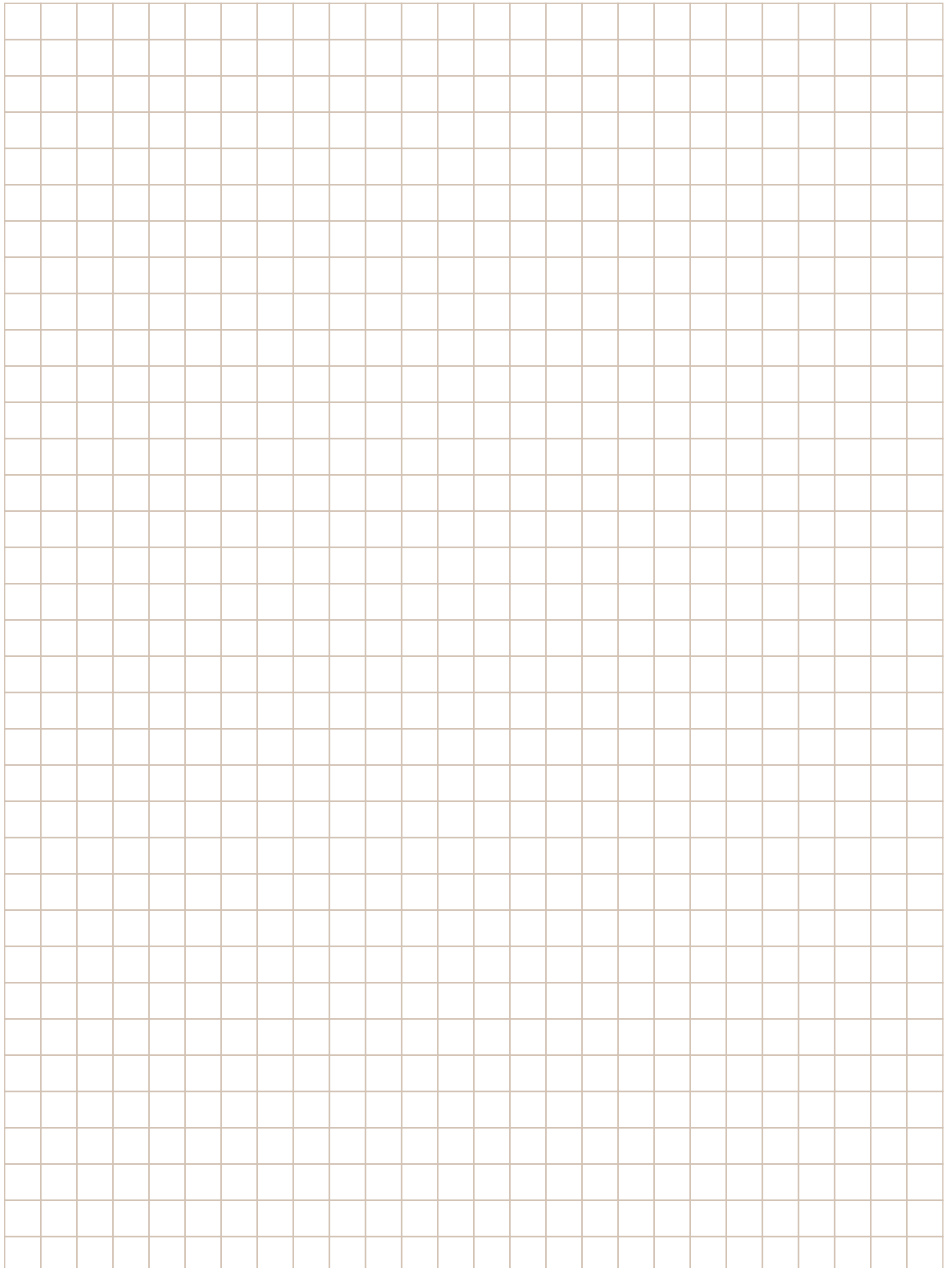


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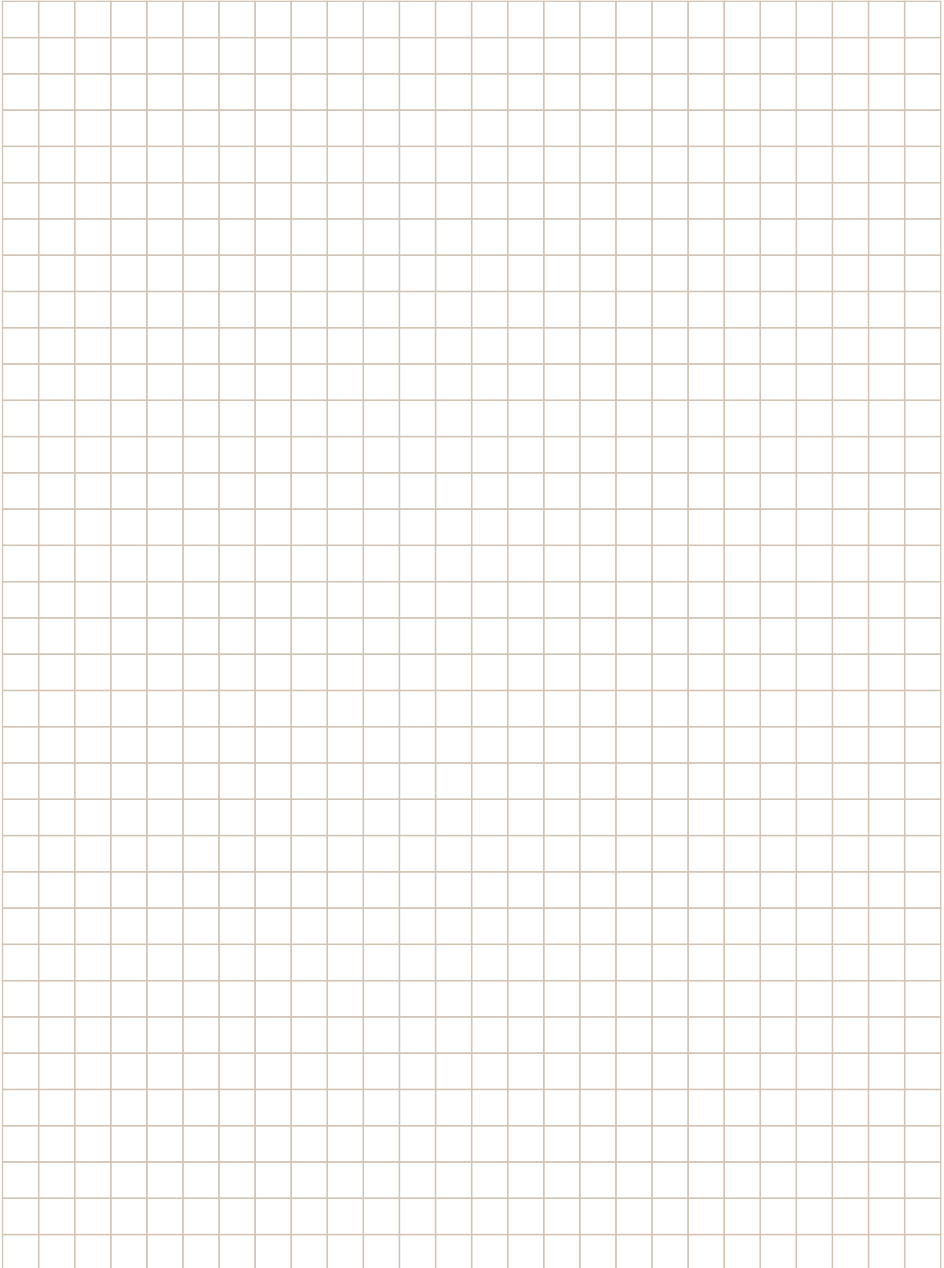


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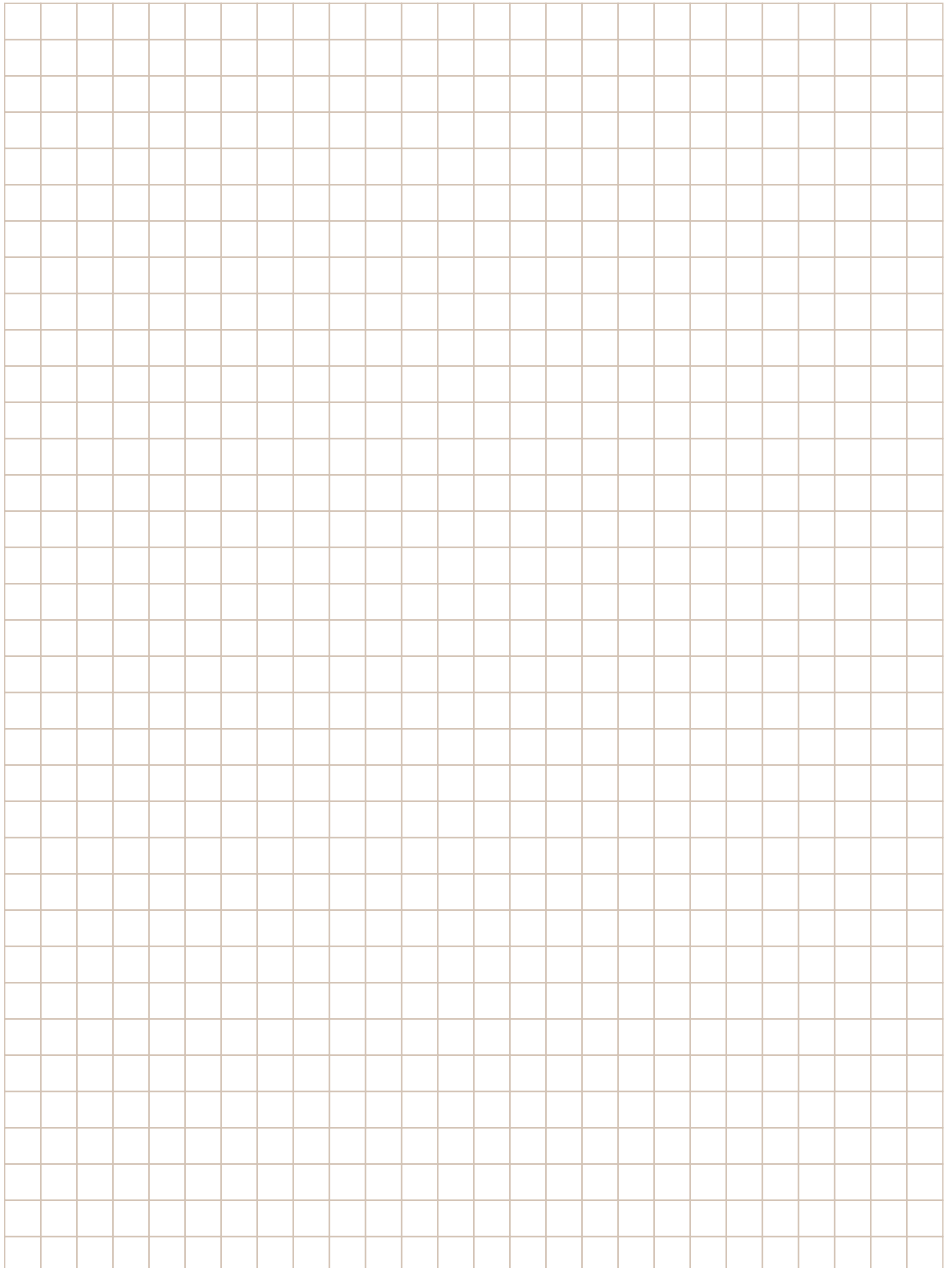


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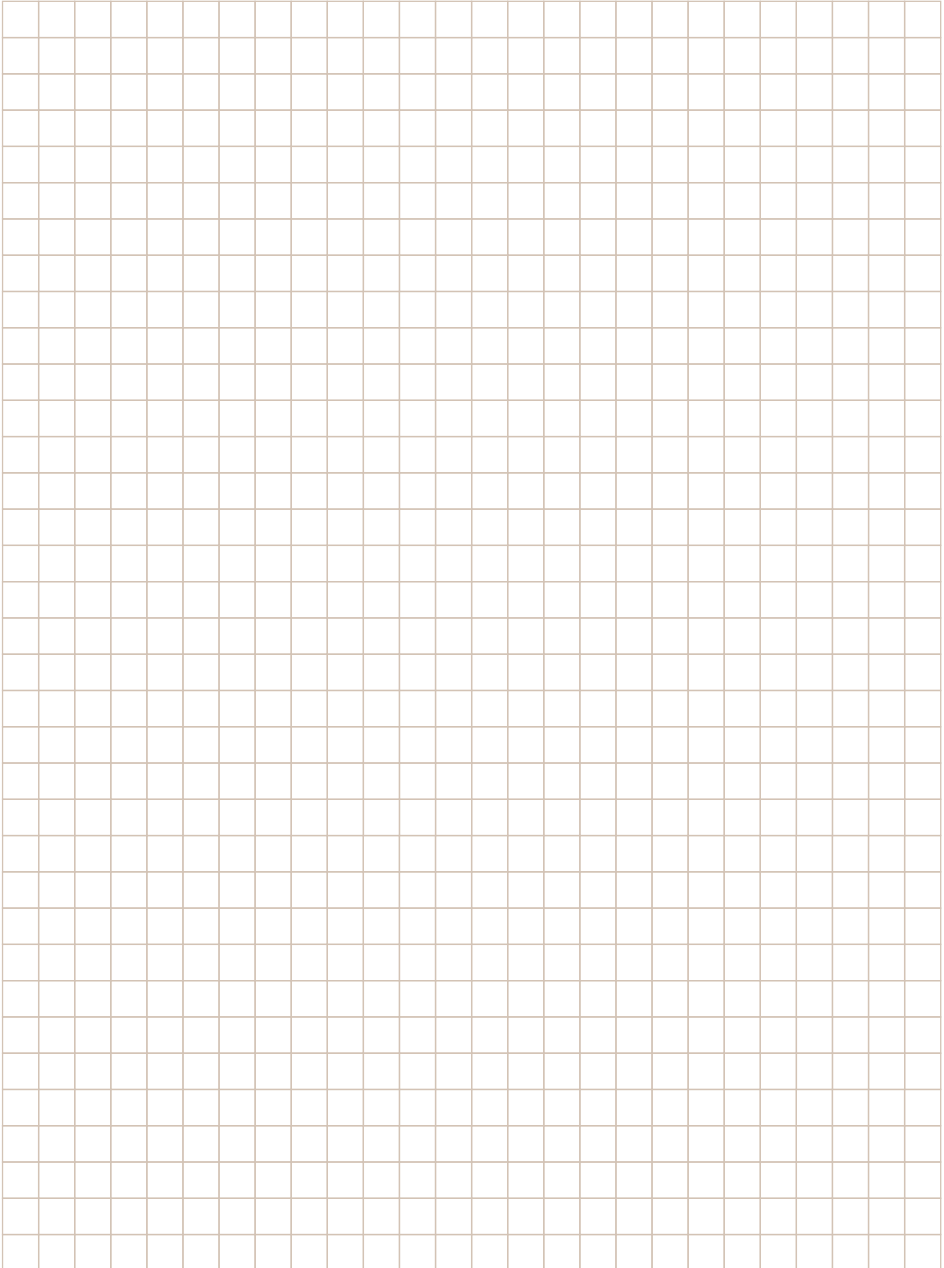


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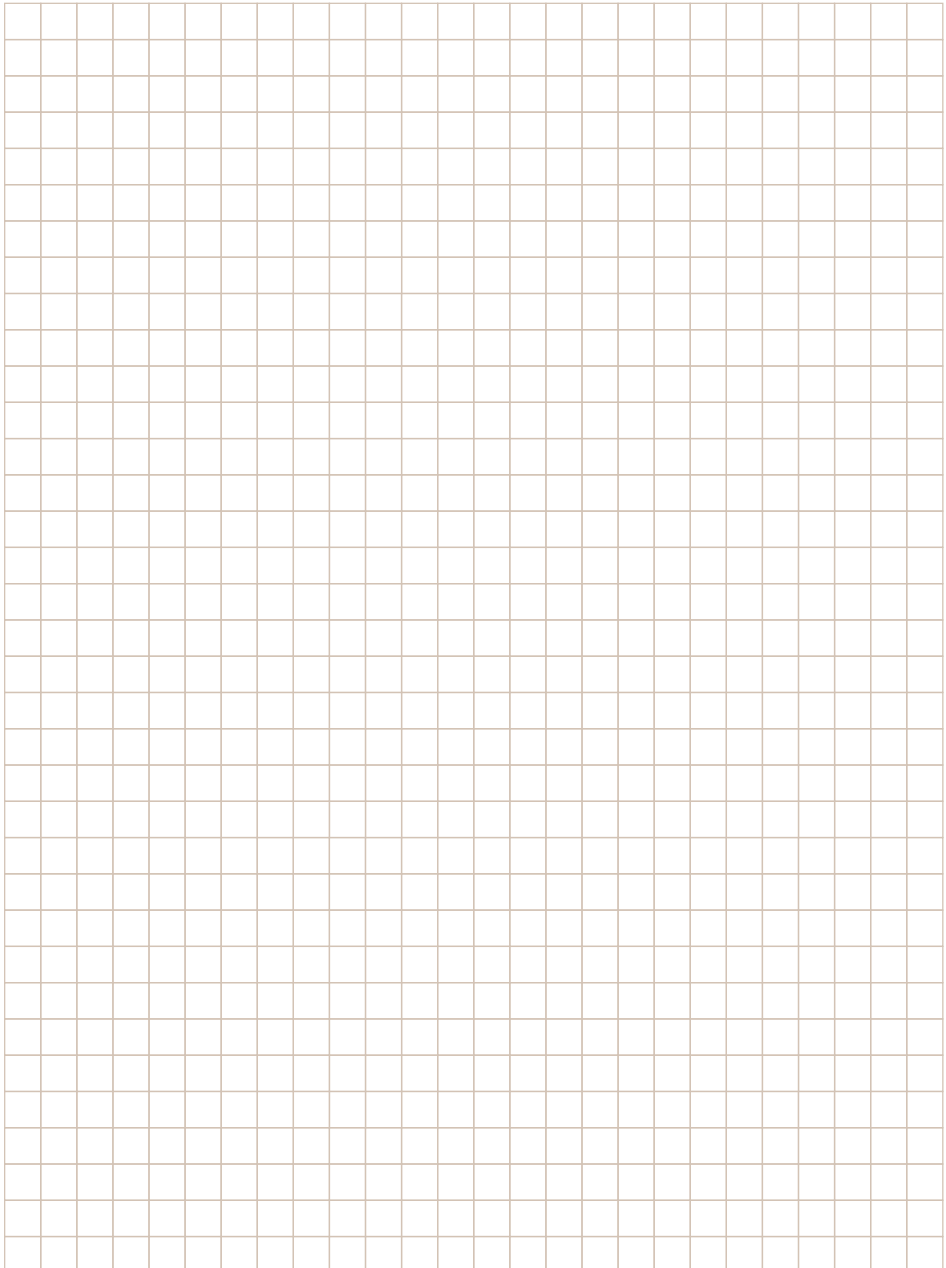


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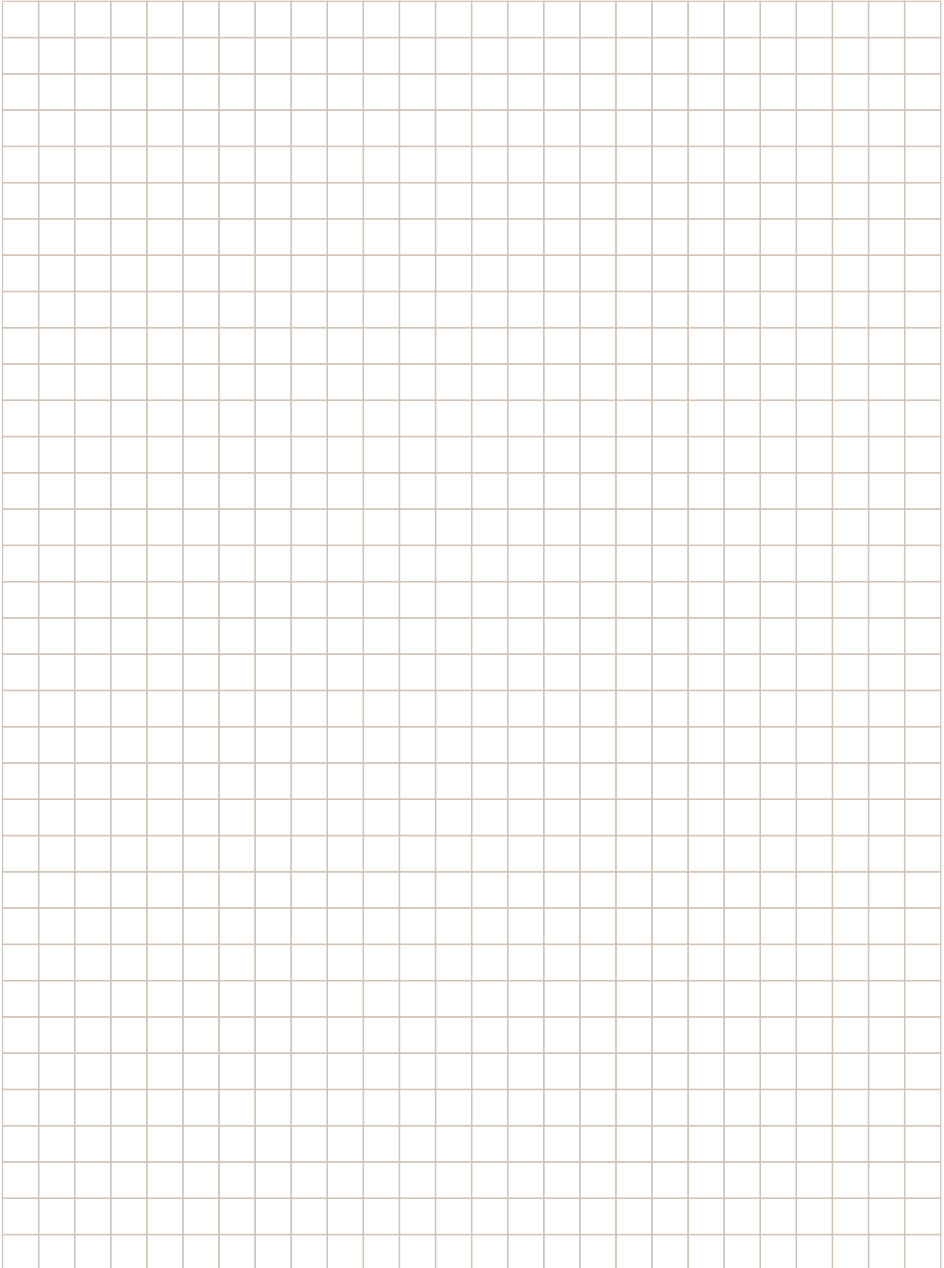


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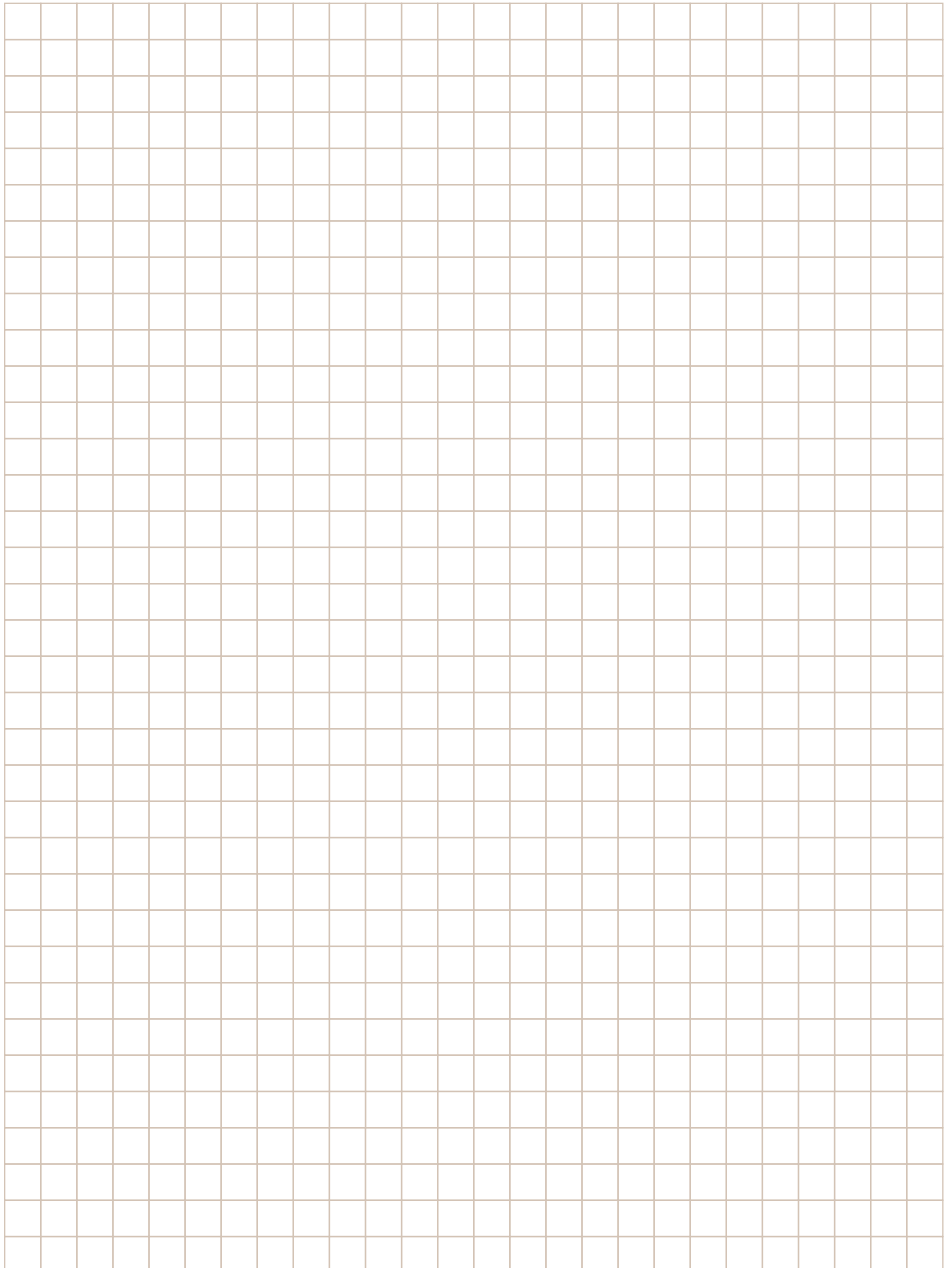


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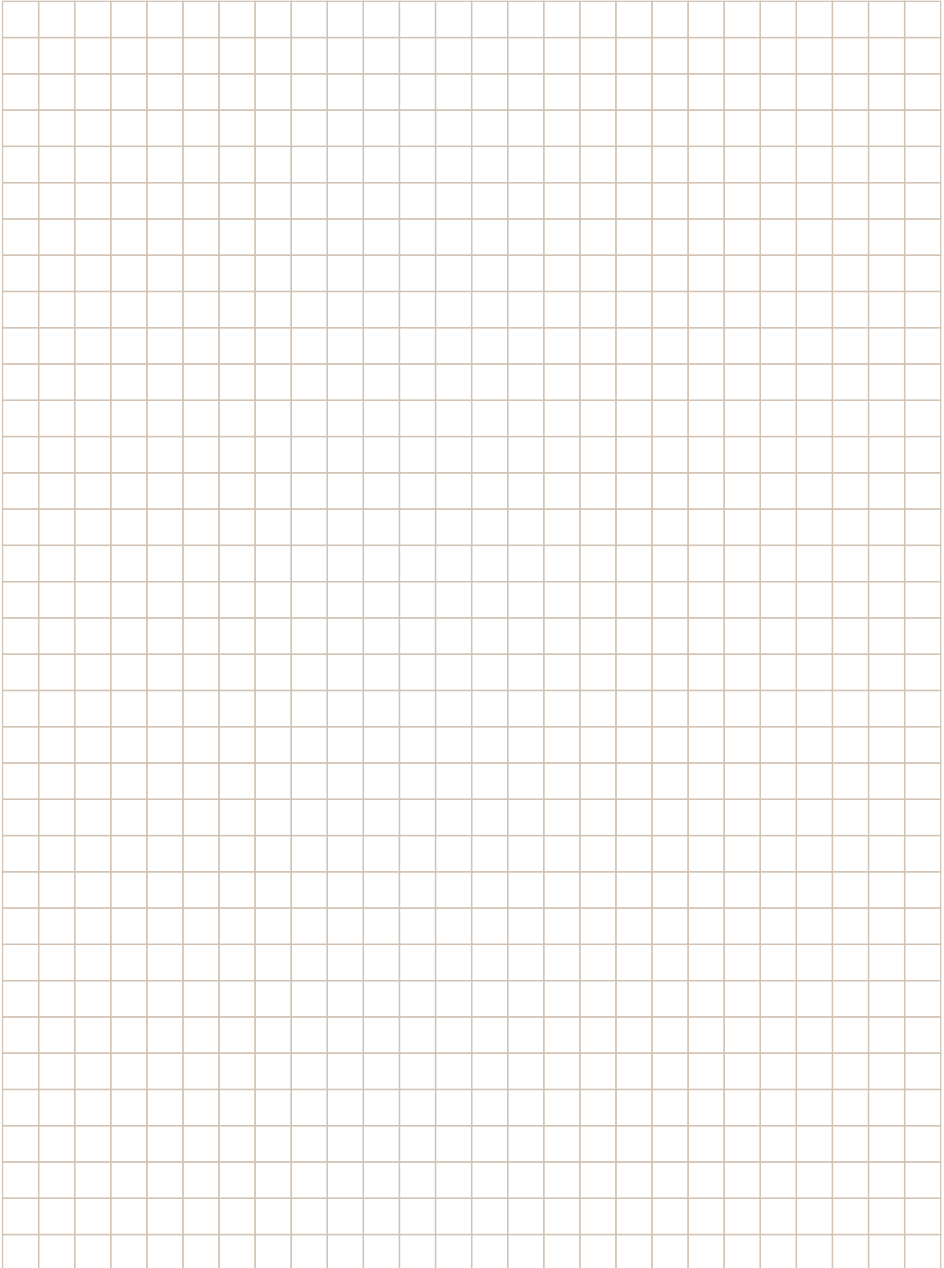


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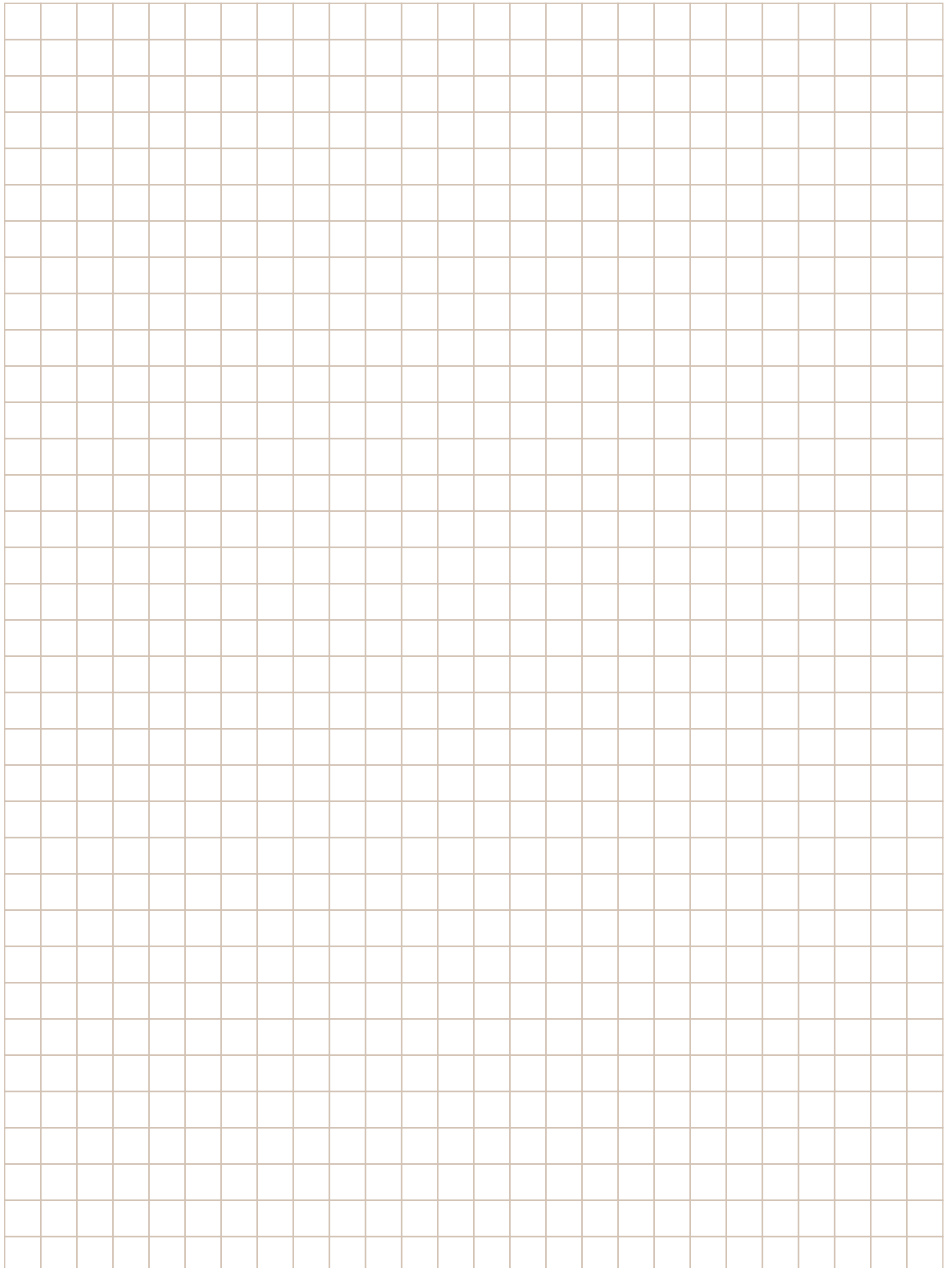


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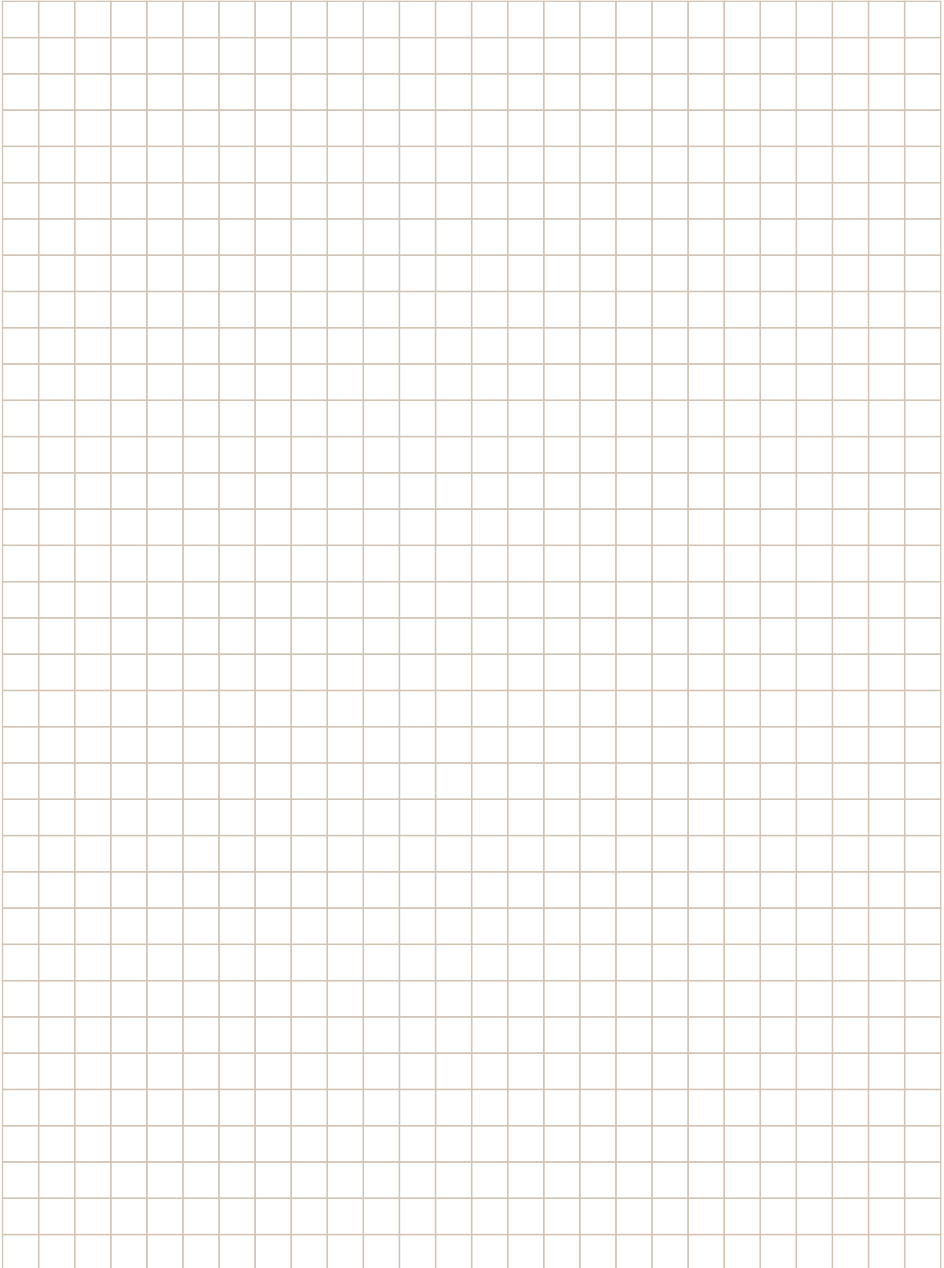


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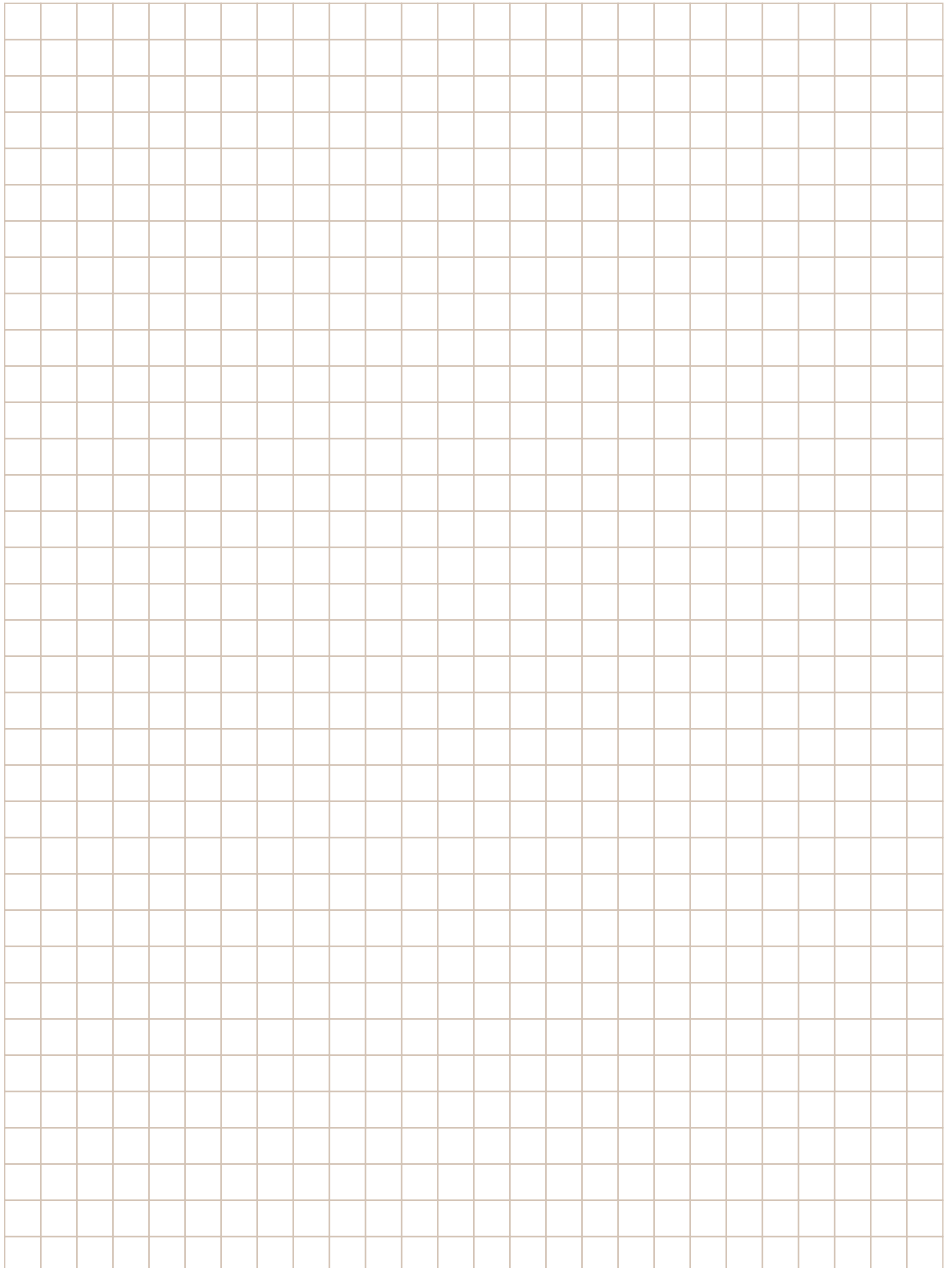


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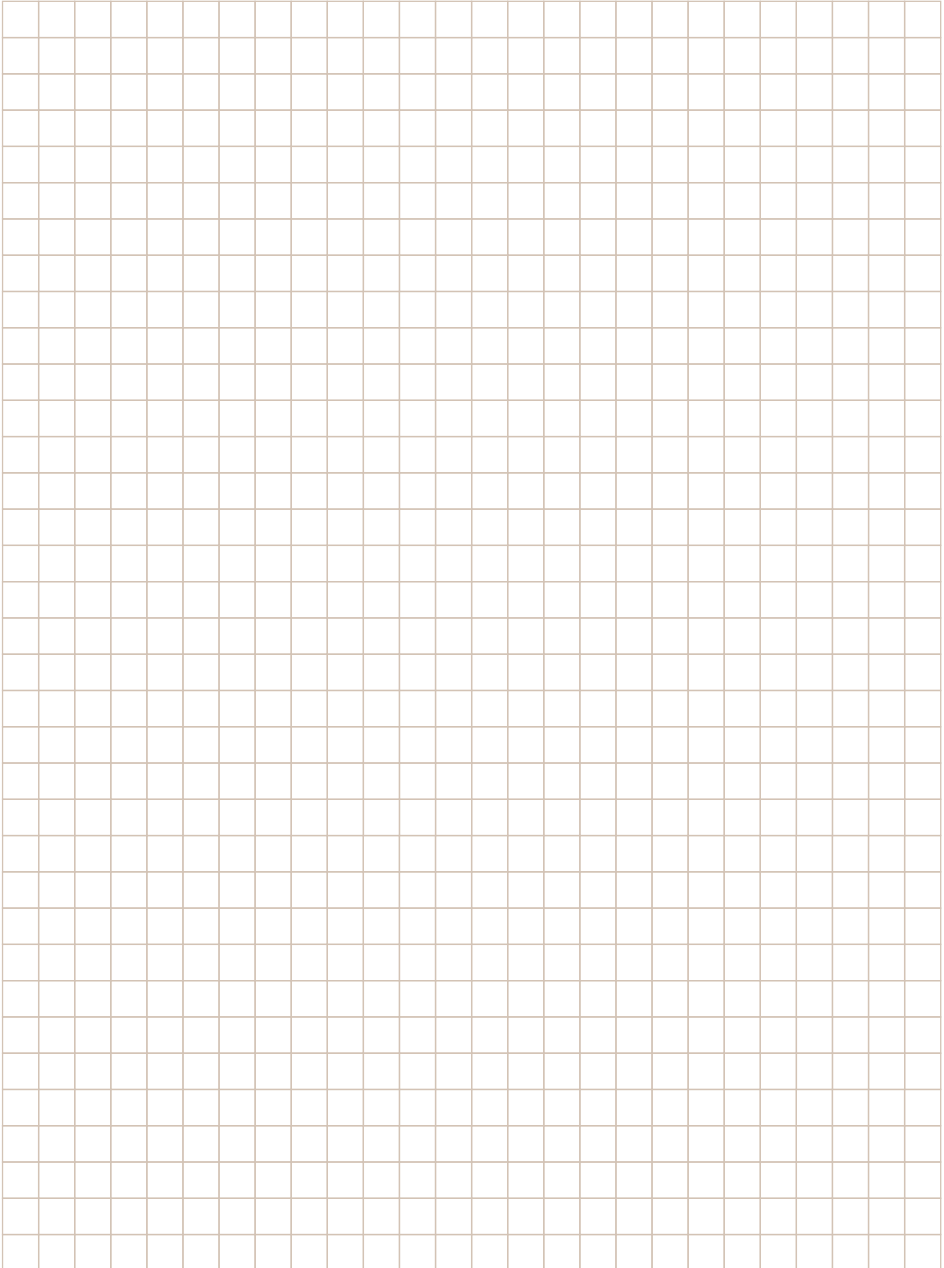


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