THE VI INTERNATIONAL FINANCIAL SECURITY OLYMPIAD

THE FINAL STAGE

The theme block 1 (mathematics, computing, economics)

Task 1 (5 points).

The mobile banking app applies the following anti-fraud rule. A client can make only L transfers per day without paying basic commission. Starting with transfer number $L+1$, the bank's commission is 10 rubles per transfer. For reducing the fraud risks, each sixth daily transfer (number 6, 12, 18, ...) undergoes an additional verification, which costs 30 rubles per transfer. This additional fee is taken regardless of basic commission.

In one day, the client made 35 transfers, each for 150 or 200 rubles. It is known that:

- the transfers for 150 rubles were charged 3 120 rubles in total (including the commission and additional fees);
- the transfers for 200 rubles were charged 3 280 rubles in total.

Find the greatest possible value of L.

Answer: 15.

Solution. Let it be x the number of transfers of 150 rubles each and y — the number of transfers of 200 rubles each. There were L transfers without the basic commission, and the other $35-L$ — with base commission on $10\cdot(35-L)$ rubles. In addition, 5 transfers of 35 underwent an additional verification, and there was charged 150 extra rubles for it. The total charge amount was

$$150x+200y+10\cdot(35-L)+150=3120+3280=6400 \text{ rubles.}$$

Meanwhile $y=35-x$, because there was 35 transfers in total. So

$$150x+200\cdot(35-x)+500-10L=6400.$$

Dividing into 10 and simplifying we have $L=110-5x$.

The value of L should be the highest possible. For this purpose the value of x should be the lowest possible. Let's calculate the total commission for the transfers of 200 rubles each:

$$3280-200y=3280-200\cdot(35-x)=200x-3720\geqslant 0,$$

whence $x\geqslant 19$, because all the numbers are integers here. Then from $L=110-5x$ we get $L\leqslant 15$.

Let's assume $x=19$, $y=16$, $L=15$. Then the total commission for the transfers for 150 rubles each was $3120-19\cdot 150=270$ rubles, and for the transfers of 200 rubles each — $3280-16\cdot 200=80$ rubles.

It is not enough to make an upper estimate. It must be shown that this value is possible. An example is shown in the table.

Transfer number	1–5	6	7–11	12	13–15	16 – 17
Transfer amount	200	200	200	150	150	150
Commission	0	30	0	30	0	10
Transfer number	18	19–23	24	25–29	30	31–35
Transfer amount	150	200	150	150	150	150
Commission	40	10	40	10	40	10

Task 2 (5 points).

There are 27 kin companies of the same profile. Each of them attracted by ICA (independent contractor agreement) exactly 5 people during the year. Whichever two companies we choose, they have exactly one common contractor. Prove that there is a person who signed the ICA with all these companies.

Solution. Let's assume that there is some company: each of the 5 people who dealt with it were also attracted no more than in 4 other companies. Then the total number of companies is not greater than $1+4\cdot 5<27$, which contradicts with the condition. So, in each company there can be found a person who dealt with at least with 5 other companies.

Let's consider some company A_0 and find there a person x_0 who has dealt with companies A_1, A_2, ..., A_5.

Let's take a random company B and show that x_0 has dealt with it. Let's assume that it is not so.

Then we can find a person x_1, who has dealt with A_1, among those attracted to B. That is not x_0 (because we assumed that x_0 was not attracted to B). Likewise, we can find a person x_2, who has dealt with A_2, among those attracted to B. That is not x_1 (otherwise the companies A_1 and A_2 will have two common contractors x_0 and x_1). And so forth. Finally, the company B has attracted 5 persons (x_1, x_2, ..., x_5), who also has dealt with A_1, A_2, ..., A_5 respectively.

Now we'l look at the companies B and A_0. By condition, they have one common contractor, let it be x_k. He is also attracted to A_k. So the companies A_0 and A_k have two common contractors x_0 and x_k. That contradicts with the condition. Thus x_0 has dealt with B. Because B was chosen randomly, we can say that x_0 has dealt with all the 27 companies.

Task 3 (5 points).

The database of a company consists of three servers. The whole system fails if at least one of the servers breaks down. The maintenance engineer has estimated the probabilities of breaking down for each server: from 0.2 to 0.4. Servers break down independently.

a) (2 points) Given the information, find the lowest upper and the highest lower estimates for the probability of the event "*at a random moment the system of the first company doesn't work*".

b) (2 points) The logic of the protection system of a competing company is different. The servers are the same, but the whole system doesn't operate only if at least two servers fail. Find the lowest upper and the highest lower estimates for the probability of the event "*at a random moment the system of the second company doesn't work*".

Answer: a) $[0,488;\ 0,784]$; **b)** $[0,104;\ 0,352]$.

Solution. a) Let's consider the events A_k "*the server with number k broke down*" and A "*the whole system doesn't work*". Then $A = A_1 \cup A_2 \cup A_3$ and $\overline{A} = \overline{A_1} \cap \overline{A_2} \cap \overline{A_3}$. Let $\mathrm{P}(A_1) = p_1$, $\mathrm{P}(A_2) = p_2$ and $\mathrm{P}(A_3) = p_3$.

The events $\overline{A_1}$, $\overline{A_2}$ and $\overline{A_3}$ are independent, so the probability of their intersection is equal to the product of their probabilities. So

$$\mathrm{P}(A) = 1 - \mathrm{P}(\overline{A}) = 1 - (1-p_1)(1-p_2)(1-p_3) = p_1 + p_2 + p_3 - p_1p_2 - p_1p_3 - p_2p_3 + p_1p_2p_3.$$

Let's consider $\mathrm{P}(A)$ as a function of p_1:

$$\mathrm{P}(A) = (1 - p_2 - p_3 + p_2p_3) \cdot p_1 + (p_2 + p_3 - p_2p_3).$$

This function is linear, and her angular coefficient at p_1 is $(1-p_2)(1-p_3)$. By the condition, it's greater than 0, because all the p_i aren't equal to 1. From this we can conclude that the value $\mathrm{P}(A)$ is increasing as a function of p_1. If we similarly consider $\mathrm{P}(A)$ as a function of p_2 or p_3, the same will be true.

So the smallest possible value of $\mathrm{P}(A)$ is obtained when the p_1, p_2 and p_3 are the smallest, and the greatest — when they are the greatest ones. Let's calculate these values:

$$\mathrm{P}_{min}(A) = 1 - 0,8^3 = 0,488 \text{ and } \mathrm{P}_{max}(A) = 1 - 0,6^3 = 0,784.$$

b) Let's consider the event B "*the system of the second company doesn't work*".

$$B = (A_1 \cap A_2) \cup (A_1 \cap A_3) \cup (A_2 \cap A_3).$$

Since the formula for inclusions and exclusions

$$\mathrm{P}(B) = \mathrm{P}(A_1 \cap A_2) + \mathrm{P}(A_1 \cap A_3) + \mathrm{P}(A_2 \cap A_3) - 2\,\mathrm{P}(A_1 \cap A_2 \cap A_3) = p_1p_2 + p_1p_3 + p_2p_3 - 2p_1p_2p_3.$$

Let's consider $\mathrm{P}(B)$ as a function of p_1:

$$\mathrm{P}(B) = (p_2 + p_3 - 2p_2p_3) \cdot p_1 + p_2p_3.$$

This function is linear, and her angular coefficient at p_1 is $p_2(1-p_3) + p_3(1-p_2)$. By the condition, it's greater than 0, because all the p_i aren't equal neither to 0 nor to 1, and each of the summands is positive. From this we can conclude that the value $\mathrm{P}(B)$ is increasing as a function of p_1. If we similarly consider $\mathrm{P}(B)$ as a function of p_2 or p_3, the same will be true.

So the smallest possible value of $\mathrm{P}(B)$ is obtained when the p_1, p_2 and p_3 are the smallest, and the greatest — when they are the greatest ones. Let's calculate these values:

$$\mathrm{P}_{min}(B) = 3 \cdot 0,2^2 - 2 \cdot 0,2^3 = 0,104 \text{ and } \mathrm{P}_{max}(B) = 3 \cdot 0,4^2 - 2 \cdot 0,4^3 = 0,352.$$

Task 4 (5 points).

There are only 10 stores in Feofania that can sell scooters under license of the company "Ecoride". New stores do not open.

The regulation of supply and demand is carried out in strictly randomly way due to antitrust legislation. In the beginning of each year, one random store is chosen through a fair draw. If this store didn't have a license, then it gets one, but if it had one, then the store loses it.

In 2026, there were exactly 3 stores with the license. Prove that in some year there will be exactly 7 stores with the license.

Solution. Let's call the situation when there are exactly n licensed stores the *position* A_n. Let x_n be the transition probability from the position A_n to the position A_7 for a year or several years. Let's find the values x_0, x_1, …, x_{10}. From the law of total probability we have:

$$\begin{cases} x_0 = x_1, \\ x_1 = 0,1x_0 + 0,9x_2, \\ x_2 = 0,2x_1 + 0,8x_3, \\ \quad \dots \\ x_9 = 0,9x_8 + 0,1x_{10}, \\ x_{10} = x_9. \end{cases}$$

Putting x_9 instead of x_{10} in the second-to-last equation, we get $0,9x_9 = 0,9x_8$, whence $x_9 = x_8$. Then $x_8 = x_7$ follows from the previous equation. And so forth. So we get $x_0 = x_1 = \ldots = x_{10}$.

The initial position in 2026 is A_3. So $x_3 = 1$, and therefore all the x_n are equal to 1. The transition in the position A_7 has the probability 1. Therefore such event will happen sooner or later.

Task 5 (5 points).

The head of a particularly dangerous criminal group has gained 64 million rubles in some criminal way. He put these to a random bank from a list of his 5 "hand–held" offshore banks, where he has bribed managers.

He leaves half of the money amount in the bank and transfers the other half to another random bank from the list. Leaving half of the remaining amount in the second bank, he transfers the other means to another random bank (it can be the first one as well). He reiterates this procedure until the last transfer amounts to exactly one million rubles.

Find the probability that the bank B from the list is involved in the scheme exactly once.

Answer: $\dfrac{34 \cdot 4^5}{5^7} \approx 0,45.$

Solution. The bank B cannot be a recipient of a transfer twice in a row. So his one-time participation in the transfers chain can be represented as a binary sequence like

$$\underbrace{0010000}_{7}$$

having length 7, in which there is only one unit (the transfer receiving). Let's divide all these sequences in two sets.

The first one consists of all the sequences that end in zero. There are 6 of them, and the probability of each is

$$\left(\frac{4}{5}\right)^5 \cdot \frac{1}{5} \cdot 1 = \frac{4^5}{5^6}.$$

The second set consists of a single sequence that ends in unit. Its probability is

$$\left(\frac{4}{5}\right)^6 \cdot \frac{1}{5} = \frac{4^6}{5^7}.$$

The total probability is

$$\frac{6 \cdot 4^5}{5^6} + \frac{4^6}{5^7} = \frac{4^5}{5^6}\left(6 + \frac{4}{5}\right) = \frac{34 \cdot 4^5}{5^7} \approx 0,45.$$

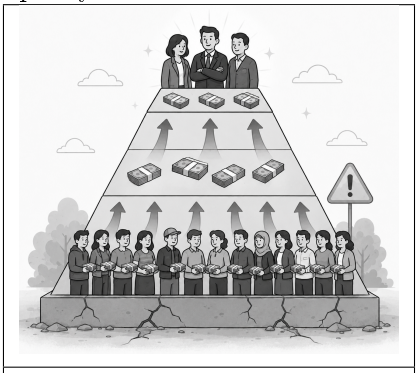
General criteria for scoring theme block 1

- The correct answer and a fully well–founded solution: maximum score.
- The points may be reduced for arithmetic errors or incomplete explanations.
- Violation of clause 29 of the Procedure for conducting school olympiads — 0 points.
- A wrong answer; an answer without explanation — 0 points.

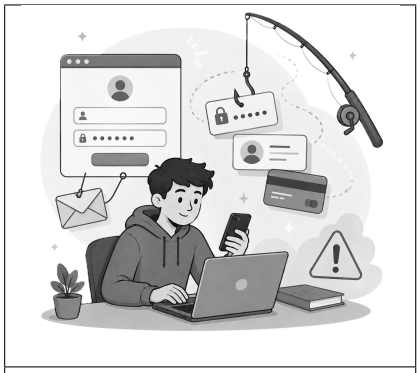
The theme block 2 (social sciences, laws)

Task 1 (5 points).

Specify the terms shown in all the pictures.



1



2



3



4



5

Answer: 1 — Financial pyramid / pyramid scheme;
2 — Phishing / phishing attack;
3 — Money laundering / laundering / laundering of funds / legalization of funds through laundering;
4 — Shadow economy;
5 — Dropshipping / cashing out / money muling.

Task 2 (5 points).

Fill in the gaps in the text.

Modern neural networks gave possibility to create hyper-realistic forgeries — ____(1)____ — which are used not only for entertainment but also for serious crimes. Fraudsters generate fake videos featuring well-known politicians or businesspeople who supposedly encourage viewers to invest in doubtful projects, such as ____(2)____ — organizations whose founders earn income by attracting money from new investors.

Fraudsters strive to move the funds they receive beyond government control as quickly as possible. This money undergoes ____(3)____ — the process of making it appear to have a legitimate origin, thereby making it indistinguishable from ordinary commercial income.

Besides, this type of deception is widely used in ____(4)____ — attacks carried out through telephone calls. Artificial intelligence clones the voice of a relative or supervisor, and the victim, hearing a familiar voice, transfers money to the specified account. Herewith, fraudsters employ methods of ____(5)____: they exert psychological pressure and create a sense of urgency and panic. Such calls are often accompanied by fraudulent SMS messages asking the recipient to follow a link and "confirm the transaction".

Combating these threats requires both technological solutions and greater financial literacy among the public. The main rule is: always verify any requests for transferring money through an independent communication channel, even if the request appears to have come from someone you know or from a trusted source.

Answer:

1) deepfakes / deepfake–content
2) financial pyramid schemes / investment pyramid schemes
3) legalization / money laundering
4) vishing / phishing
5) social engineering

.

Task 3 (5 points).

Write out the numbers of all the correct statements.

1) Endemic corruption undermines the financial security of the national economy because of replacing the competitive market-based selection of projects with administrative access to resources. That forces law-obedient economic actors either to move into the shadow economy or to incur unproductive transaction costs for protecting their assets from rent-seeking withdrawals.
2) The existence of stable, long-term relations between a company and a unique partner bank eliminates by itself the risk of asset loss.
3) A revolving credit line by bank card is functionally equal to a household reserve fund because the access to borrowed funds provides the same level of financial stability as accumulated personal savings.
4) Publishing images of payment cards on open source platforms creates a considerable risk of funds compromising even if the CVV code is hidden. Since the card number, expiration date, and cardholder's name combined with social engineering methods may be sufficient to obtain later the missing details.
5) The generative language models' evolution has contributed to financial fraud's transition from mass standardized mailings to personalized individual attacks. Since automatic generating a unique text for a specific purpose reduces the efficiency of common anti-fraud filters based on pattern recognition.
6) A household's lack of reserve liquidity fund does not have a sufficiently considerable effect on its financial strength in case of stable main income.
7) An organization's formal compliance with regulatory requirements ensures the insider asset withdrawal schemes impossibility.
8) Storing a complete set of card details — the card number, expiration date, and cardholder's full name — in unsecured digital communication channels increases the cardholder's weakness to social engineering attacks even if the CVV code itself is not revealed.
9) Diversifying financial service channels — using several banks and different payment tools — reduces the overall risk of a single point of failure compared with a strategy of concentrating all transactions at one counterparty.
10) The speed of technological progress in artificial intelligence does not create any new vectors for financial fraud and is limited only by traditional deception schemes.

Answer: 1, 4, 5, 8, 9.

Task 4 (5 points).

Read the text and answer the questions.

Extract from a court judgment. A. received an offer from an unidentified person to open a payment account in his own name in exchange for monetary reward and following transfer of electronic means of payment and electronic data carriers so that third parties could use the payment account to perform illegal operations including the receipt, withdrawal, and transfer of funds.

A. had no intention of carrying out any transactions including the receipt, withdrawal, or transfer of funds or any other grounds for transferring money. He understood that after the accounts were opened and the electronic means of payment and electronic data carriers were lent to third parties, those persons would be able to carry out the illegal turnover of means of payment by their own. Nevertheless, A. agreed to loan the electronic means of payment and electronic data carriers designed for the illegal receipt, withdrawal, and transfer of funds using his payment account.

In order to carry out his criminal intent and without intention of managing the funds in his payment account, A. visited an office of Bank B. on July 24, 2025, for the purpose of opening a payment account and obtaining a bank card in his own name.

Question 4.1 (1 point). In terms of criminal law, what action did A. perform by opening the account and transferring electronic means of access to third parties in exchange for award? Explain your answer.

Question 4.2 (1 point). Is the fact that A. had no intention to manage the funds in his account a mitigating circumstance? Explain your answer.

Question 4.3 (1 point). What obligations of a bank customer did A. violate by participating in the scheme "open an account → transfer access → receive money"? Explain your answer.

Question 4.4 (1 point). Can A.'s actions be classified as aiding and abetting the legalization (laundering) of criminal revenues if he did not know the details of the third parties' transactions? Explain your answer.

Question 4.5 (1 point). What mandatory action should the bank B. have taken when opening A.'s account to minimize the risk of its use for the "illegal turnover of means of payment"? Explain your answer.

Answer:

4.1. A. was engaged in the illegal turnover of means of payment by providing third parties with electronic means of payment account's access in order to make illegal transactions.

4.2. No. This does not mitigate his liability because of his understanding. Thus, he has provided access to third parties for the illegal turnover of means of payment and did so in exchange for award.

4.3. A. violated the terms of the banking service agreement that prohibit the disclosure of authentication tools and require the customer's account usage only for their own transactions.

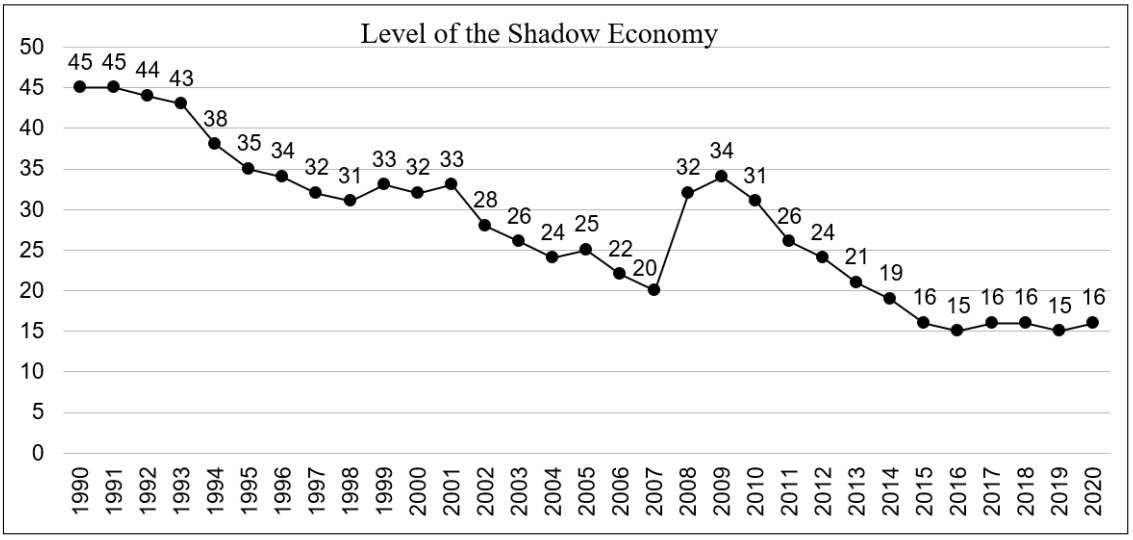
4.4. Yes. A. knowingly created the conditions for making illegal transactions by providing payment instruments. This can be classified as aiding and abetting even if he did not know the specific details of the transactions.

4.5. The bank should have conducted an enhanced customer identification and assessed the customer's anticipated financial activity. If grounds for suspicion arose — for example, if no apparent economic justification for opening the account was given — the service provision should be refused or the account should be placed under enhanced monitoring.

.

Task 5 (5 points).

According to the chart data, match each statement with the corresponding time period.



	Time periods
1	1990–1993
2	1994–2001
3	2002–2007
4	2008–2011
5	2012–2015
6	2016–2020

Characteristics of the economic situation:

A. Transition to a market economy, widely use of barter and informal accountings

B. Digitalization of state services provision, integration of transparent tax systems, increasing the share of electronic payments

C. A period of rapid economic growth and a significant enhancing of fiscal control

D. The global financial crisis, accompanied by decreasing in formal employment and falling incomes

E. Stabilization of social institutions, maintaining a high level of unregistered financial transactions

Answer: 1–A, 2–E, 3–C, 4–D, 5–B.

General criteria for scoring theme block 2

- In the tasks 1, 2, 4 and 5: 1 point is scored for each correct answer selected.
- In task 3, points are scored according to the following formula, rounding down:

$$B \cdot \frac{n}{N} \cdot \left(1 - \frac{m}{M}\right),$$

  where B is the maximum score for the task, N is the number of correct answers to the task, M is the number of incorrect answers to the task, while n and m the number of correct and incorrect answers provided by the participant.
- Violation of clause 29 of the Procedure for conducting school olympiads — 0 points.
- A wrong answer; an answer without explanation — 0 points.

The theme block 3 (Case)

"Taxidrive" acts as an aggregator, entering into contracts with passenger taxi companies. "Taxidrive" provides taxis with orders, keeps meeting the cars' and drivers' requirements under review, and also renders accountant's and auditor's services. The taxis carry out the orders coming from the aggregator mobile app and transfer monthly service fees to "Taxidrive".

The statistic service of "Taxidrive" summarizes the results of the taxis work each month. The activity report of five taxis of "Taxidrive" for a few last months is given in the table.

Table 1: Operation parameters of five taxis for a few last months

Taxi	Number of cars	Monthly fixed charges C, M (10^6) rubles	Average monthly variable charges V, rubles per order	Average monthly revenue P, rubles per order	Average monthly number of orders N
"Tour"	63	6,5	118	611	12 870
"Carriage"	25	3,3	143	754	5 735
"Wheel"	38	4,2	120	678	5 855
"Sedan"	50	5,6	131	781	18 820
"SuperTrip"	42	4,8	127	569	11 300

Fixed charges C do not depend on quantity of completed orders. These include:

- premises rent;
- mandatory insurance and taxes;
- payments under vehicle leasing contracts;
- payments for technical inspection and maintenance;
- salaries of engineers, employees and staff;
- basic drivers' wage.

Variable charges V directly depend on quantity of completed orders:

- piecework part of drivers' salary;
- unscheduled car repair costs in the event of damage;
- fuel, technical fluids and other consumables;
- aggregator commission fees.

The *breakeven point* N_0 is the minimal volume of services provided or products sold (in our case, the number of orders) at which the company does not incur losses.

Task 1 (3 points). The analyst sent a request

Derive the breakeven point in kind formula for a taxi company contracted with "Taxidrive"

to three AI models and got three different breakeven point formulas. Do not derive the formula itself, but explain which two of the formulas given below are wrong and why.

$$N_0 = C - N \cdot (P - V) \tag{1}$$

$$N_0 = \frac{C}{P + V} \tag{2}$$

$$N_0 = \frac{C}{P - V} \tag{3}$$

Answer: The formulas (1) and (2) are wrong.

Solution. The formula (1) shows the difference between the fixed charges and the profit from the orders. The result is measured in roubles. The breakeven point in kind formula was required, so the result should be a dimensionless value, as in the formulas (2) and (3). In the formula (2), the average charges per order are added to the average revenue per order in the denominator. The first are charges and the second are incomes, so they shouldn't be with the same sign. The average profit per order is the difference between the revenue and the charges, as it is properly shown in the formula (3).

Task 2 (3 points). Find the breakeven point for each of the taxi companies listed in the table.

Answer: See the table below.

Solution. The breakeven point is calculated using the formula (3)

$$N_0 = \frac{C}{P - V}.$$

In our case it is the number of orders. Because it is required to find the minimal quantity, at which there won't be losses, the results should be rounded up.

Let's make the calculations and write the results in a table.

Taxi	C, M rubles	V, rubles per order	P, rubles per order	$P - V$, rubles per order	The breakeven point N_0, orders
"Tour"	6,5	118	611	493	13 185
"Carriage"	3,3	143	754	611	5 401
"Wheel"	4,2	120	678	558	7 527
"Sedan"	5,6	131	781	650	8 616
"SuperTrip"	4,8	127	569	442	10 860

The taxis having $N < N_0$ are unprofitable. These are "Tour" and "Wheel".

Task 3 (3 points). For each of the taxis, find the minimal integer absolute changing of the value in the column P with which the taxis will change their status (stop incuring losses if they had, and vice versa).

Answer: See the table below.

Solution. Likewise the formula (3) we have

$$P_0 = V + \frac{C}{N}.$$

This is that value in the column P, at which the taxis will be on the verge of breaking even at their current parameters. It is necessary to round the result in the right direction: we should round up if the taxi company was inprofitable, and down in the other case. We'll find the value for each of them and write the results in a table.

Taxi	C, M rubles	N, orders	P, rubles per order	P_0, rubles per order	$\lvert P - P_0 \rvert$, rubles per order
"Tour"	6,5	12 870	611	624	13
"Carriage"	3,3	5 735	754	718	36
"Wheel"	4,2	5 855	678	838	160
"Sedan"	5,6	18 820	781	428	353
"SuperTrip"	4,8	11 300	569	551	18

From the journalistic investigation. The taxi market seems to have grown to almost completely digital: the orders are registered in the app, the prices are calculated automatically, and the payments pass through the aggregator. But some taxis remain using cash turnover, and some orders are accepted bypassing the apps. If such orders don't get into the reports, the company may hide a part of its revenues and reduce its variable charges.

Sometimes the investigators face with an opposite situation: a small taxi company reports a plenty of orders which is difficult to explain by number of its cars and drivers. Non-existent orders can produce fictional revenues — money received from side sources is shown in reports as received from actual passengers and considered as the legitimate income.

There is another way of money withdrawal or legalization of illegally received means. The taxi company pays for renovation, rent, operation or advisory services as if they were done by third-party companies, but actually these services were not provided or cost much cheaper. According to the documents, profits are disappearing, although the scope of work, the staff and property of the company do not change.

Unusual values by themselves do not prove willful financial violations. However, the conjunction of multi-month unprofitability with constant remaining money or expansive growth of orders number without vehicle fleet, staff, mileage and costs increase becomes a reason to compare the app data, cash receipts, banking operations, travel documents and the cars' on-board computers information.

It is known that all the five companies from the table have been working evenly last months. They did not expand or reduce the number of cars nor the staff. The rental conditions of areas and administrative buildings

stay the same. The wage fund was also unchanged. The available amounts in bank accounts of these companies were all but the same at the end of each month.

Task 4 (3 points). Which taxis from the table have got financial errors? For each of them, explain why did you decide that.

Answer: These are "Wheel" and "Sedan".

Solution. The average monthly numbers of orders are close to the breakeven points of the taxis "Tour", "Carriage" and "SuperTrip". Based on the data in the table, these companies are struggling: on average each month the financial results are close to zero. Meanwhile, the "Tour" is unprofitable on average, but "Sedan" and "SuperTrip" are not.

The monthly average number of orders is greatly (nearly 30%) less than the breakeven point of the "Wheel". We can assume that some part of the trips and incomes are hidden, performed by cash payments and evaded paying taxes. Another assumption is that the "Wheel" receives funds from other sources, acting as a legal company for money laundering.

On the contrary, the monthly average number of orders of the "Sedan" is more than twice as much as the breakeven point. The car fleet doesn't expand and the wage fund doesn't grow. We might suspect the withdrawal of funds and their spending for third-party needs.

Task 5 (3 points). In countering money laundering theory, there are three stages determined: placement of funds, layering of illegal incomes on top of legal ones and their integration into the legal financial circulation. Suppose that the taxis with financial errors are really involved in financial fraud. Which stages of money laundering can they be associated with? Explain why did you decide that.

Answer: The "Wheel" can be associated with the first two stages, and "Sedan" — with all three.

Solution.

1) Placement is the process of depositing funds obtained through criminal means into the financial system. In this case, funds of criminal origin that enter the turnover of taxis are included in the taxis' financial turnover.
2) Layering or layering out is the process of mixing criminal assets with legitimate funds by transferring them to other institutions and organizations and/or moving money to other accounts. In this case, this could involve transfers to other companies for repairs, rent, and so on, as well as transfers to the accounts of taxi fleets themselves under the pretext of receiving funds from cash–based transportation.
3) Integration — the use of "laundered" funds by criminals under the guise of legal ones. After the operations have been performed, taxi companies have the opportunity to use legalized funds in any area of their work: the legalized funds can be used to form both the piecework portion of wages, as well as the payment of the basic part of drivers' salaries and other expenses.

General criteria for scoring theme block 3

- The correct answer and a fully well–founded solution: maximum score.
- The points may be reduced for arithmetic errors or incomplete explanations.
- Violation of clause 29 of the Procedure for conducting school olympiads — 0 points.
- A wrong answer; an answer without explanation — 0 points.