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| МИНОБРНАУКИ РОССИИ |
| Федеральное государственное бюджетное образовательное учреждение высшего образования **«МИРЭА – Российский технологический университет»**  **РТУ МИРЭА** |
| Институт искусственного интеллекта (ИИИ)  Кафедра промышленной информатики (ПИ) |

**ОТЧЁТ ПО**

**ПРАКТИЧЕСКОЙ РАБОТЕ №1**

по дисциплине «Информатика»

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| Лабораторная работа представлена к защите | «\_\_\_» \_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2024г. |  |  |
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Москва, 2024г.

Задача 1

#include <iostream>

#include <cstdlib>

using namespace std;

int main()

{

setlocale(LC\_ALL, "Russian");

cout << "Эмиль" << endl;

system("pause");

return 0;

}

Задача 2

#include <iostream>

#include <cstdlib>

using namespace std;

int main()

{

float number1;

float number2;

cout << "Input your first number: ";

cin >> number1;

cout << "Input your second number: ";

cin >> number2;

cout << "Summ: " << number1 + number2 << endl;

cout << "Difference: " << number1 - number2 << endl;

cout << "Product: " << number1 \* number2 << endl;

if (number2 != 0)

{

cout << "Quotient: " << number1 / number2 << endl;

}

else

{

cout << "Divison by zero error" << endl;

}

system("pause");

return 0;

}

Задача 3

#include <iostream>

#include <cstdlib>

using namespace std;

int main()

{

float b, c, x;

cout << "bx + c = 0" << endl;

cout << "Enter b: ";

cin >> b;

cout << "Enter c: ";

cin >> c;

cout << b << "x + " << c << " = 0" << endl;

if (b == 0)

{

if (c == 0)

{

cout << "'x' is any number";

}

else if (c != 0)

{

cout << c << " = 0" << endl << "No solutions";

}

}

else if ((b != 0) and (c == 0))

{

cout << "x = 0";

}

else

{

x = -c / b;

cout << "x = " << x;

}

return 0;

}

Задача 4

#include <iostream>

#include <cstdlib>

using namespace std;

int main()

{

float a, b, c, x, d, x1, x2;

cout << "ax^2 + bx + c = 0" << endl;

cout << "Enter a: ";

cin >> a;

cout << "Enter b: ";

cin >> b;

cout << "Enter c: ";

cin >> c;

cout << a << "x^2 + " << b << "x + " << c << " = 0" << endl;

if (a == 0)

{

if (b == 0)

{

if (c == 0)

{

cout << "'x' is any number";

}

else if (c != 0)

{

cout << c << " = 0" << endl << "No solutions";

}

}

else if ((b != 0) and (c == 0))

{

cout << "x = 0";

}

else

{

x = -c / b;

cout << "x = " << x << endl;

}

}

else if (a != 0)

{

d = b \* b - 4 \* a \* c;

if (d > 0)

{

x1 = (-b + sqrt(d)) / (2 \* a);

x2 = (-b - sqrt(d)) / (2 \* a);

cout << "x1 = " << x1 << endl;

cout << "x2 = " << x2 << endl;

}

else if (d == 0)

{

x = -b / (2 \* a);

cout << "x =" << x << endl;

}

else if (d < 0)

{

cout << "No solutions, D < 0";

}

}

return 0;

}

Задача 5

#include <iostream>

using namespace std;

int main()

{

string name;

int time, lamp, curtain;

cout << "Hello user, what is your name?" << endl << "Name: ";

cin >> name;

cout << "Glad to see you, " << name << "! When you'll answer my questions enter 1 - if yes, 0 - if no" << endl;

cout << "Is it day outside? - ";

cin >> time;

cout << "Are curtains open? - ";

cin >> curtain;

cout << "Is lamp turned on? - ";

cin >> lamp;

if ((curtain and time) or lamp)

{

cout << "The room is light!" << endl;

}

else

{

cout << "The room is dark!" << endl;

}

}