<https://github.com/alena56taR/VVP>

1.

#include <iostream>

using namespace std;

int main(void)

{

int a[10][10];

int m;

cout << "M: ";

cin >> m;

int i, j;

for (i = 0; i < m; ++i) {

for (j = 0; j < m; ++j) {

cout << "a[" << i + 1 <<";"<< j + 1 << "]=";

cin >> a[i][j];

}

}

int i2;

for (i2 = 0; i2 < m / 2; ++i2)

{

for (j = i2; j < m - i2; ++j)

{

cout << a[j][i2];

}

for (i = i2 + 1; i <= m - i2 - 1; ++i)

{

cout << a[m - i2 - 1][i];

}

for (j = m - i2 - 2; j >= i2; --j)

{

cout << a[j][m - i2 - 1];

}

for (i = m - i2 - 2; i >= i2 + 1; --i)

{

cout << a[i2][i];

}

cout << "\n";

}

cout << a[m / 2][m / 2] << " \n";

return 0;

}

2.

#include <iostream>

using namespace std;

int main(void)

{

int a[10][10];

int sum, p, m, n, k, i, j;

cout << "M: ";

cin >> m;

cout << "N: ";

cin >> n;

cout << "K: ";

cin >> k;

for (i = 0; i < m; ++i)

{

for (j = 0; j < n; ++j)

{

cout << "a[" << i + 1 << ";" << j + 1 << "]=";

cin >> a[i][j];

}

}

sum = 0;

p = 1;

for (j = 0; j < n; ++j)

{

sum += a[k-1][j];

p \*= a[k-1][j];

}

cout << "sum = " << sum << "; mult = " << p;

return 0;

}

3.

#include <iostream>

using namespace std;

int main(void)

{

setlocale(LC\_ALL, "Russian");

int a[10][10];

int p, minP, minJ, m, n, i, j;

cout << "M: ";

cin >> m;

cout << "N: ";

cin >> n;

for (i = 0; i < m; ++i)

{

for (j = 0; j < n; ++j)

{

cout << "a[" << i << ";" << j << "]=";

cin >> a[i][j];

}

}

minP = -1;

p = 1;

for (i = 1; i < m; ++i)

{

for (j = 1; j < n; ++j)

{

p \*= a[i][j];

}

if (minP < p)

minP = p;

}

for (j = 1; j < n; ++j)

{

p = 1;

for (i = 1; i < m; i++)

{

p \*= a[i][j];

}

if (p < minP)

{

minP = p;

minJ = j;

}

}

cout << "Наименьшее произведение p=" << minP << " столбца под индексом j=" << minJ;

return 0;

}

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4.

#include <iostream>

using namespace std;

int main(void)

{

setlocale(LC\_ALL, "Russian");

int a[10][10];

int sum, m, k, n, i, j;

double c;

cout << "M: ";

cin >> m;

cout << "N: ";

cin >> n;

for (i = 1; i <= m; ++i)

{

for (j = 1; j <= n; ++j)

{

cout << "a[" << i << ";" << j << "]=";

cin >> a[i][j];

}

}

sum = 0;

for (i = 1; i <= m; ++i)

{

for (j = 1; j <= n; ++j)

{

sum += a[i][j];

}

}

c = sum / (m \* n);

k = 0;

for (j = 1; j <= n; ++j)

{

for (i = 1; i <= m; i++)

{

if (a[i][j] > c)

k += 1;

}

}

cout << "k=" << k;

return 0;

}

5.

#include <iostream>

using namespace std;

int main()

{

setlocale(LC\_ALL, "Russian");

float a[10][2];

int n;

cout << "N:";

cin >> n;

int i;

for (i = 0; i < n; ++i)

{

cout << "a[" << i + 1 << "]:" << "\n";

cout << "x=";

cin >> a[i][0];

cout << "y=";

cin >> a[i][1];

"\n";

}

int p1, p2, p3, j, z;

float p, pmax = 0;

for (i = 0; i < n; ++i)

for (j = i + 1; j < n; ++j)

for (z = j + 1; z < n; ++z) {

p = 0;

p += sqrt(pow(a[i][0] - a[j][0], 2) + pow(a[i][1] - a[j][1], 2));

p += sqrt(pow(a[i][0] - a[z][0], 2) + pow(a[i][1] - a[z][1], 2));

p += sqrt(pow(a[j][0] - a[z][0], 2) + pow(a[j][1] - a[z][1], 2));

if (p > pmax)

{

p1 = i;

p2 = j;

p3 = z;

pmax = p;

}

}

cout << "P=" << pmax << " при:" << "\n";

cout << "a[" << p1 + 1 << "]:" << "\n";

cout << "x=" << a[p1][0];

cout << ", y=" << a[p1][1]<< "\n";

cout << "a[" << p2 + 1 << "]:" << "\n";

cout << "x=" << a[p2][0];

cout << ", y=" << a[p2][1] << "\n";

cout << "a[" << p3 + 1 << "]:" << "\n";

cout << "x=" << a[p3][0];

cout << ", y=" << a[p3][1] << "\n";

return 0;

}