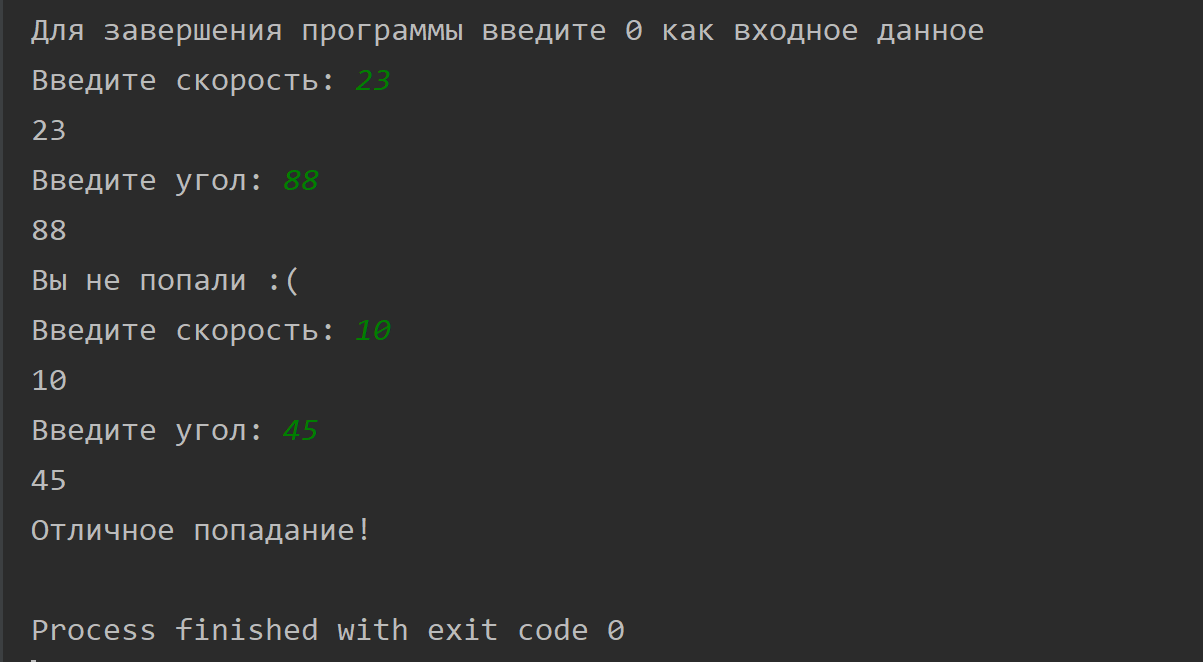
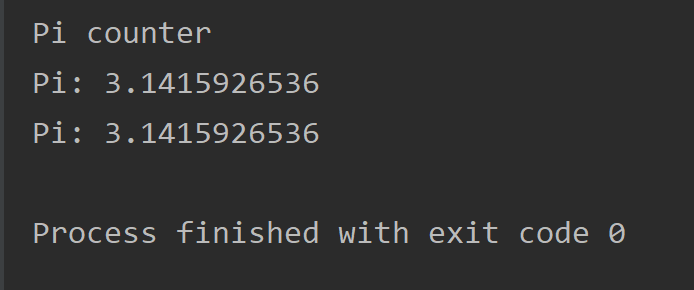
#include <cmath>  
#include <iostream>  
using namespace std;  
  
#define PI 3.14159265  
#define G 9.81  
#define target 10  
#define target\_size float(1)/2  
  
int main() {  
 int v;  
 float l, alpha;  
 cout << "Для завершения программы введите 0 как входное данное" << endl;  
 while (true) {  
 cout << "Введите скорость: ";  
 cin >> v;  
 cout << "Введите угол: ";  
 cin >> alpha;  
 if (alpha==0 or v==0) {  
 cout << "Запрошен выход" << endl;  
 break;  
 }  
 alpha \*= PI/180;  
 float y = 0.001, x = 0, t = 0, prev\_x;  
 while (y >= 0) {  
 y = v\*sin(alpha)\*t-(G\*pow(t, 2))/2;  
 prev\_x = x;  
 x = v\*cos(alpha)\*t;  
 t += 0.01;  
 }  
 l = prev\_x;  
 //l = (pow(v, 2)\*sin(2\*double(alpha)\*PI/180)/G);  
 //cout << "L: " << l << endl;  
 if ((l<target+target\_size) and (l>target-target\_size)) {  
 cout << "Отличное попадание!" << endl;  
 break;  
 } else {  
 cout << "Вы не попали :(" << endl;  
 }  
 }  
 return 0;  
}



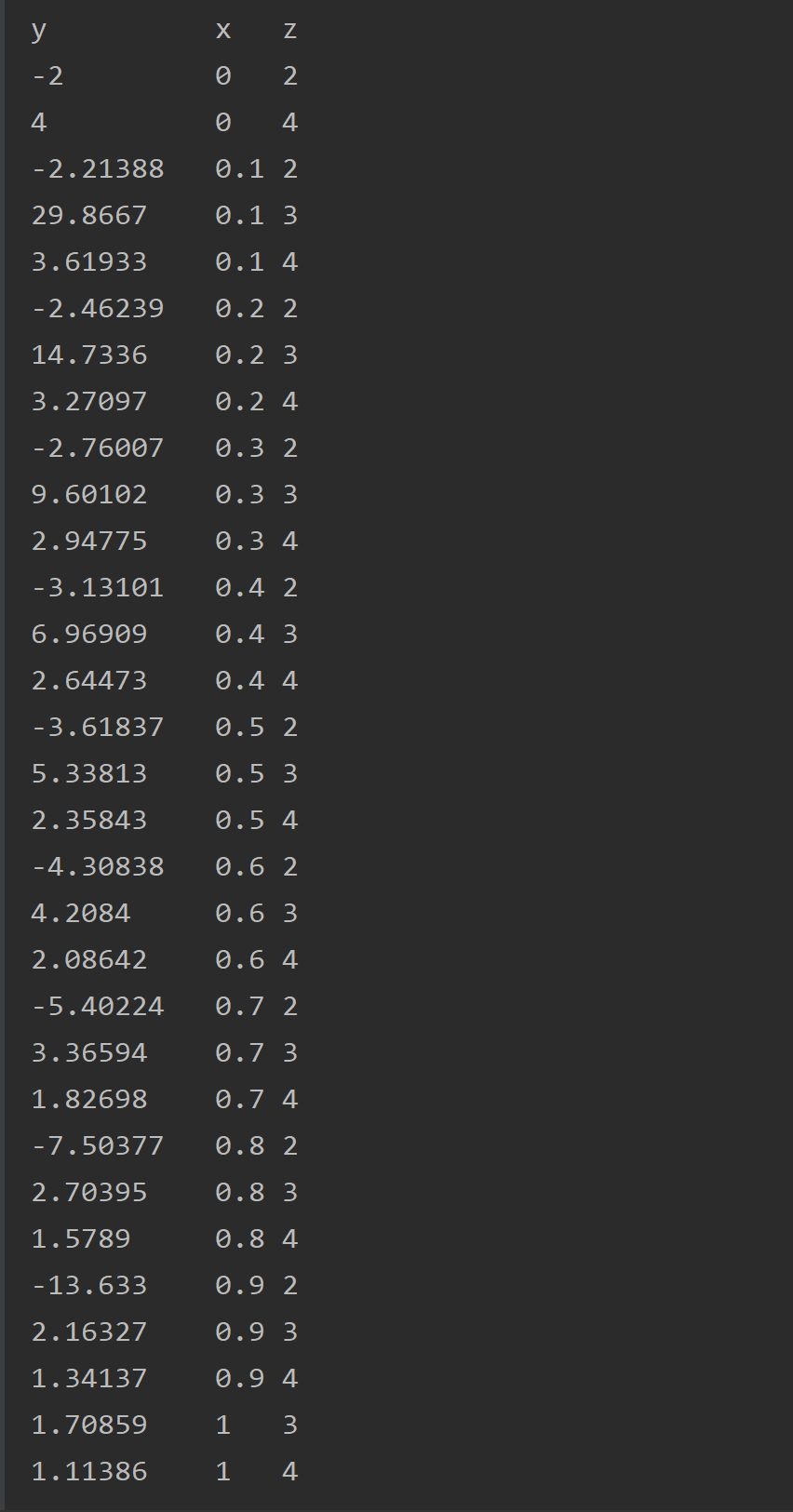


#include <cmath>  
#include <iostream>  
#include <iomanip>  
using namespace std;  
  
  
int main() {  
 cout << "Pi counter" << endl;  
 long double pi\_1 = 0, pi\_2 = 0;  
 for(unsigned int k = 0; k < 500000; k++) {  
 pi\_1 += (1/pow(16, k)) \* (double(4) / (8 \* k + 1) - double(2) / (8 \* k + 4) - double(1) / (8 \* k + 5) - double(1) / (8 \* k + 6));  
 }  
 pi\_2 = 4\*atan(1);  
 cout << "Pi: " << setprecision(11) << pi\_1 << endl;  
 cout << "Pi: " << setprecision(11) << pi\_2 << endl;  
 return 0;  
}





#include <cmath>  
#include <iostream>  
#include <iomanip>  
using namespace std;  
  
#define z\_start 2  
#define z\_end 4  
  
int main() {  
 // Весна  
 float y;  
 cout << "y x z" << left << endl;  
 for (float x=0; x<1.1; x += 0.1) {  
 for (float z=z\_start; z<=z\_end; z++) {  
 y = (sqrt(pow(x, 2)+pow(z, 2))/(x+z-3))\*cos(x);  
 if (isnan(y) or isinf(y)) {  
 continue;  
 }  
 cout << setw(10) << y << " " << setw(3) << x << " " << setw(3) << z << endl;  
 }  
 }  
  
 return 0;  
}



#include <iostream>  
#include <string>  
#include <cmath>  
  
using namespace std;  
  
string fill(int val, string chr) {  
 string fill\_str = "";  
 for (int i=0; i<val; i++) {  
 fill\_str += chr;  
 }  
 return fill\_str;  
}  
  
int main() {  
 int height, base\_1, base\_2;  
 cout << "Введите высоту трапеции: ";  
 cin >> height;  
 cout << "Введите верхнее основание трапеции: ";  
 cin >> base\_1;  
 base\_2 = base\_1\*2;  
 float offset = float(base\_1)/2/float(height-1);  
 //cout << offset << endl;  
 int start = base\_1/2;  
 int end = base\_2-start;  
 cout << fill(start, " ") << fill(base\_1, "\*") << endl;  
 for (int i=1; i<(height-1); i++) {  
 int left = start-round(offset\*float(i));  
 int right = end+round(offset\*float(i));  
 cout << fill(left, " ") << fill (right-left, "\*") << endl;  
 }  
 cout << fill(base\_2, "\*") << endl;  
  
 return 0;  
}

