

```

1 public class Main {
2     public static void main(String[] args) {
3         //-----
4
5         // TASK 1
6
7         short a[] = new short[20];
8         for (short number = 20; number > 0; number--) {
9             a[20 - number] = number;
10        }
11
12        //-----
13
14        // TASK 2
15
16        float x[] = new float[16];
17        for (int i = 0; i < 16; i++) {
18            x[i] = (float) Math.random() * 19 - 4;
19        }
20
21        //-----
22
23        // TASK 3
24
25        double arr[][] = new double[20][16];
26        int[] check = {1, 3, 4, 6, 8, 9, 11, 17, 18, 19};
27        for (int i = 0; i < 20; i++) {
28            for (int j = 0; j < 16; j++) {
29                if (a[i] == 16) {
30                    arr[i][j] = Math.cos(Math.cbrt(Math.cos(x[j])));
31                }
32                else {
33                    boolean flag = false;
34                    for (int n : check) {
35                        if (a[i] > n) break;
36                        if (a[i] == n) {
37                            flag = true;
38                            break;
39                        }
40                    }
41                    if (flag) arr[i][j] = Math.pow(Math.cos(Math.pow((x[j] - 1) / 2, 2)), 2 *
Math.pow((4.0 / 3 / (x[j] - 0.5)), 2));
42                    else arr[i][j] = Math.log(Math.sqrt((Math.abs(x[j]) + 1) /
Math.abs(x[j]))) * Math.pow(1.0 / 3 + Math.atan(Math.pow(Math.E,
Math.cbrt(-Math.pow(Math.cos(x[j]), 2)))), 2);
43                }
44            }
45        }
46
47        //-----
48
49        // Print results
50
51        for (int i = 0; i < 20; i++) {
52            for (int j = 0; j < 16; j++) {
53                System.out.printf("%.2f ", arr[i][j]);
54            }
55            System.out.print('\n');
56        }
57
58        //-----
59    }
60 }

```