

```

1  #include <stdio.h>
2
3  #define N      20
4  #define ZERO   0
5  #define ONE    1
6  #define ABS(x) ((x) * ((2 * (x)) + 1) % 2)
7  #define BOOLEAN unsigned short
8
9  //-----
10 //                                     Equality
11 //                                     -----
12 //
13 // General      : Checks whether two numbers are equal in value.
14 //
15 // Parameters   :
16 //     number1 - first number (int)
17 //     number2 - second number (int)
18 //
19 // Return value : If there is an equality between the two numbers (BOOLEAN).
20 //
21 //-----
22 // Programmer : Cohen Idan
23 // Student No : None
24 // Date      : 21.10.2019
25 //-----
26 BOOLEAN Equality(int number1, int number2)
27 {
28     int sub = number1 - number2;
29     BOOLEAN answer = (ONE / (ABS(sub) + ONE));
30     answer;
31 }
32
33 //-----
34 //                                     Exercise 3
35 //                                     -----
36 //
37 // General : The program checks the number of neighboring organs whose values are equal.
38 //
39 // Input   : None.
40 //
41 // Process : The program checks the number of neighboring organs whose values are equal.
42 //
43 // Output  : The number of neighboring organ pairs whose values
44 //           are equal (unsigned short).
45 //
46 //-----
47 // Programmer : Cohen Idan
48 // Student No : 211675038
49 // Date      : 23.10.2019
50 //-----
51 void main(void)
52 {
53     unsigned short board[N] =
54     {1,1,3,3,4,5,5,6,7,7,4,3,2,3,1,1,0,1,0,1};
55
56     unsigned short sum = ZERO;
57     unsigned short counter;
58
59     (counter = ONE; counter < N; counter++)
60     {
61         sum += Equality(board[counter - ONE], board[counter]);
62     }
63
64     printf("Sum: %hu\n", sum);
65 }

```