

```

1  #include <stdio.h>
2
3  #define N          30
4  #define CUBE       6
5  #define INDEX_PLAYER 24
6  #define ZERO       0
7  #define ONE        1
8  #define TWO        2
9  #define ABS(x)      (x) * (((2 * (x)) + 1) % 2)
10 #define BOOLEAN     unsigned short
11
12 //-----
13 //                               NumBBiggerThenNumA
14 //                               -----
15 //
16 // General      : Checks if the second number (B) is greater than the first number (A).
17 //
18 // Parameters   :
19 //               number1 - first number (int)
20 //               number2 - second number (int)
21 //
22 // Return value : If the second number (B) is greater than the first number (A) (BOOLEAN).
23 //
24 //-----
25 // Programmer : Cohen Idan
26 // Student No : None
27 // Date       : 21.10.2019
28 //-----
29 BOOLEAN NumBBiggerThenNumA(int a, int b)
30 {
31     int sub = a - b + ONE;
32     BOOLEAN answer = (ONE / (ABS(sub) + (sub) + ONE));
33     answer;
34 }
35
36 //-----
37 //                               ChangeBool
38 //                               -----
39 //
40 // General      : Boolean variable inverse.
41 //
42 // Parameters   :
43 //               bool1 - Boolean variable (BOOLEAN)
44 //
45 // Return value : Boolean variable (BOOLEAN).
46 //
47 //-----
48 // Programmer : Cohen Idan
49 // Student No : None
50 // Date       : 21.10.2019
51 //-----
52 BOOLEAN ChangeBool(BOOLEAN bool1)
53 {
54     BOOLEAN answer = ++bool1 % TWO;
55     answer;
56 }
57
58 //-----
59 //                               Exercise 2
60 //                               -----
61 //
62 // General : The program checks the amount of cube flips for which the player
63 //           can advance his tool forward.
64 //
65 // Input   : None.
66 //
67 // Process : The program counts the number of zeros on the board to position 6
68 //           after the player's position on the board.
69 //
70 // Output  : The amount of cube throws for which the player can advance
71 //           his tool (unsigned short).
72 //

```

```
73 //-----
74 // Programmer : Cohen Idan
75 // Student No : 211675038
76 // Date      : 23.10.2019
77 //-----
78 void main(void)
79 {
80     unsigned short board[N] =
81     {0,1,0,1,0,1,0,0,1,1,1,0,0,0,1,1,0,1,0,1,0,0,0,0,0,1,1,1,1,0};
82
83     unsigned short sum      = ZERO,
84                   counter   = INDEX_PLAYER,
85                   last_step = counter + CUBE;
86
87     (++counter; NumBBiggerThenNumA(counter, last_step); counter++)
88     {
89         sum += ChangeBool(board[counter]);
90     }
91
92     printf("Sum: %hu\n", sum);
93 }
```