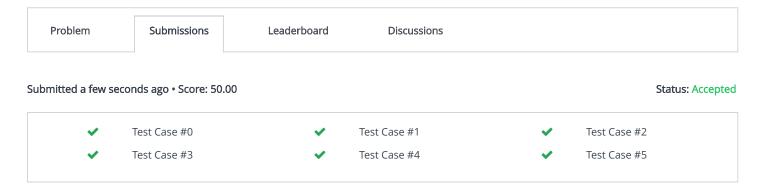
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The Power Sum



Submitted Code

```
Language: C++
                                                                                            P Open in editor
 1 #include <bits/stdc++.h>
 3 using namespace std;
 5 string ltrim(const string &);
 6 string rtrim(const string &);
 7
8 /*
9 * Complete the 'powerSum' function below.
10
11 * The function is expected to return an INTEGER.
   * The function accepts following parameters:
13 * 1. INTEGER X
14 * 2. INTEGER N
15 */
16
17 int powerSum(int X, int N, int i = 1) {
       // calculate the power of i
18
19
      int p = pow(i, N);
20
       // if power is greater than X we can't add more to the sum
      if (p > X) return 0;
21
       // if power is equal to X, it's a valid sum
22
23
      if (p == X) return 1;
       // recursively calculate the number of different ways
24
25
       // we have to consider the cases whether i is included or not
       return powerSum (X, N, i + 1) + powerSum (X - p, N, i + 1);
26
27 }
28
29
30 int main()
31 {
32
       ofstream fout(getenv("OUTPUT_PATH"));
33
34
       string X_temp;
       getline(cin, X_temp);
```

```
37
       int X = stoi(ltrim(rtrim(X_temp)));
38
39
       string N_temp;
40
       getline(cin, N_temp);
41
       int N = stoi(ltrim(rtrim(N_temp)));
42
43
       int result = powerSum(X, N);
44
45
       fout << result << "\n";</pre>
46
47
       fout.close();
48
49
       return 0;
50
51 }
52
53 string ltrim(const string &str) {
54
       string s(str);
55
56
       s.erase(
57
           s.begin(),
           find_if(s.begin(), s.end(), not1(ptr_fun<int, int>(isspace)))
58
59
       );
60
61
       return s;
62 }
63
64 string rtrim(const string &str) {
65
      string s(str);
66
67
       s.erase(
68
           find_if(s.rbegin(), s.rend(), not1(ptr_fun<int, int>(isspace))).base(),
69
           s.end()
70
       );
71
72
       return s;
73 }
74
```

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