

6222. Minimum Addition to Make Integer Beautiful

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You are given two positive integers `n` and `target`.

An integer is considered **beautiful** if the sum of its digits is less than or equal to `target`.

Return the *minimum non-negative integer* `x` such that `n + x` is beautiful. The input will be generated such that it is always possible to make `n` beautiful.

Example 1:

Input: `n = 16, target = 6`
Output: `4`
Explanation: Initially `n` is 16 and its digit sum is `1 + 6 = 7`. After adding 4, `n` becomes 20 and

Example 2:

Input: `n = 467, target = 6`
Output: `33`
Explanation: Initially `n` is 467 and its digit sum is `4 + 6 + 7 = 17`. After adding 33, `n` becomes 500 and digit sum becomes `5 + 0`




Example 3:

Input: `n = 1, target = 1`
Output: `0`
Explanation: Initially `n` is 1 and its digit sum is 1, which is already smaller than or equal to `target`.

Constraints:

- `1 <= n <= 1012`
- `1 <= target <= 150`
- The input will be generated such that it is always possible to make `n` beautiful.

JavaScript





```
1 const sumOfDigit = (x) => { let s = x + '', res = 0; for (const c of s) res += c - '0'; return res; };
2
3 const makeIntegerBeautiful = (N, target) => {
4   if (sumOfDigit(N) <= target) return 0;
5   let s = N + '', len = s.length, res = Number('1' + '0'.repeat(len));
6   for (let i = len - 1; ~i; i--) {
7     let rest;
8     if (i == len - 1) {
9       rest = 10 - (s[i] - '0');
10    } else {
11      let f = ((s[i] - '0') + 1);
12      let fullR = f + '0'.repeat(len - i - 1);
13      let l = s.slice(0, i), r = s.slice(i);
14      rest = Number(fullR) - Number(r);
15    }
16    let v = N + rest, sum = sumOfDigit(v);
17    if (sum <= target) {
18      res = v - '0';
19      break;
20    }
21  }
22  return res - N;
23 };
```

☐ Custom Testcase Use Example Testcases

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