

===== Input =====

```
solver = Solution()
m = [5,4,6]
t = [3,1,5,4]
print solver.problem6_1(m,t)
```

===== Output =====

18.0

===== Python Code =====

```
import numpy as np
class Solution(object):
    def problem6_1(self, m, t):
        """ function designed for problem 6-1
        @para: m is an array of length D containing the time for reading m(i) on day i
                t is an array of length n containing the time to read chapter #j, t(j)
        """
        # init
        D = len(m)
        n = len(t)
        Memo = np.zeros((D,n+1))
        T = 0
        Memo[D-1][n] = m[D-1]**4
        for j in range(n-1,-1,-1):
            T += t[j]
            Memo[D-1][j] = (max(m[D-1]-T,0))**4 + max(T-m[D-1],0)
            # base case unhappiness

        # iterative DP
        for i in range(D-2, -1, -1):
            for j in range(n+1):
                record = []
                record.append(m[i]**4+Memo[i+1][j])
                T = 0
                for p in range(j,n):
                    T += t[p]
                    temp_unhap = (max(m[i]-T,0))**4 + max(T-m[i],0) + Memo[i+1][p+1]
                    record.append(temp_unhap)
                Memo[i][j] = min(record)

        return Memo[0][0]

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```