

B. Covered Path

time limit per test: 1 second

memory limit per test: 256 megabytes

input: standard input

output: standard output

The on-board computer on Polycarp's car measured that the car speed at the beginning of some section of the path equals V_1 meters per second, and in the end it is V_2 meters per second. We know that this section of the route took exactly t seconds to pass.

Assuming that at each of the seconds the speed is constant, and between seconds the speed can change at most by d meters per second in absolute value (i.e., the difference in the speed of any two adjacent seconds does not exceed d in absolute value), find the maximum possible length of the path section in meters.

Input

The first line contains two integers V_1 and V_2 ($1 \leq V_1, V_2 \leq 100$) — the speeds in meters per second at the beginning of the segment and at the end of the segment, respectively.

The second line contains two integers t ($2 \leq t \leq 100$) — the time when the car moves along the segment in seconds, d ($0 \leq d \leq 10$) — the maximum value of the speed change between adjacent seconds.

It is guaranteed that there is a way to complete the segment so that:

- the speed in the first second equals V_1 ,
- the speed in the last second equals V_2 ,
- the absolute value of difference of speeds between any two adjacent seconds doesn't exceed d .

Output

Print the maximum possible length of the path segment in meters.

Examples

input
5 6 4 2
output
26

input
10 10 10 0
output
100

Note

In the first sample the sequence of speeds of Polycarpus' car can look as follows: 5, 7, 8, 6. Thus, the total path is $5 + 7 + 8 + 6 = 26$ meters.

In the second sample, as $d = 0$, the car covers the whole segment at constant speed $v = 10$. In $t = 10$ seconds it covers the distance of 100 meters.

Codeforces Round #298 (Div. 2)

Finished

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