1939. Speed Limit

Time Limit: 1.0 Seconds Memory Limit: 65536K
Total Runs: 6116 Accepted Runs: 3137

Bill and Ted are taking a road trip. But the odometer in their car is broken, so they don't know how many miles they have driven. Fortunately, Bill has a working stopwatch, so they can record their speed and the total time they have driven. Unfortunately, their record keeping strategy is a little odd, so they need help computing the total distance driven. You are to write a program to do this computation.

For example, if their log shows

Speed in miles per hour	Total elapsed time in hours
20	2
30	6
10	7

this means they drove 2 hours at 20 miles per hour, then 6-2=4 hours at 30 miles per hour, then 7-6=1 hour at 10 miles per hour. The distance driven is then (2)(20) + (4)(30) + (1)(10) = 40 + 120 + 10 = 170 miles. Note that the total elapsed time is always since the beginning of the trip, not since the previous entry in their log.

Input: The input consists of one or more data sets. Each set starts with a line containing an integer n, $1 \le n \le 10$, followed by n pairs of values, one pair per line. The first value in a pair, s, is the speed in miles per hour and the second value, t, is the total elapsed time. Both s and t are integers, $1 \le s \le 90$ and $1 \le t \le 12$. The values for t are always in strictly increasing order. A value of -1 for n signals the end of the input.

Output: For each input set, print the distance driven, followed by a space, followed by the word "miles".

Example input:	Example output:
3 20 2 30 6 10 7 2 60 1 30 5 4 15 1 25 2 30 3 10 5 -1	170 miles 180 miles 90 miles

Source: *Mid-Central USA 2004*