F: Split One

Time Limit: 1 second

Nick is walking to work. His watch treats his walking commute as an outdoor walk workout and notifies him of how long it takes him to walk a mile. Unfortunately, one day he doesn't get the notification and wants to know how long it took him to walk the first mile of his commute.

Nick starts his commute at time 0. His commute has n intermediate checkpoints. Nick is so consistent in his walking speed that between two consecutive checkpoints (and between the start of his commute and the first checkpoint), his speed is constant.

Input

The first line of input contains a single integer T $(1 \leq T \leq 50)$, representing the number of test cases.

The descriptions of T test cases follow. Each test case starts with a line containing a single integer n $(1 \leq n \leq 50)$, the number of checkpoints.

The next n lines each describe one checkpoint in the order Nick reaches them. Each line contains two integers, d and t $(1 \leq d \leq 10^4, 1 \leq t \leq 10^4)$, indicating that the checkpoint is d feet from the start of Nick's commute and that Nick reaches it t seconds after starting.

The values of d are strictly increasing, the values of t are strictly increasing, and the last value of d is at least 5280 (the number of feet in a mile).

Output

For each test case, output the number of seconds it took Nick to walk the first mile of his commute. Your answer will be considered correct if it has absolute error at most 1.

Sample Input 1	Sample Output 1
3 2 2640 360 5280 720 2 2640 360 5281 361 1 5281 1	720 360.999621356 0.999810642

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