Problem E
Enclosure

Pahom walks around as large an area as he wants, starting at daybreak and ending at sunset, using his spade to make markers as he goes. The polygon marked out by his markers as vertices represents the land Pahom has claimed.

Pahom walks at a speed of one metre per second, each marker cost m seconds to make, the total available time between daybreak and sunset is t seconds. Find the maximum area Pahom could claim.

Pahom must return to the starting point by the end.

Input

The first line of input contains the number of cases, c ($1 \leq c \leq 1000$).

The next c line of input each consist of two space-separated integers m and t ($1 \leq m, t \leq 10^8$) — the time required to make one marker, and the total time available to Pahom.

Output

For each case, output a real number representing the maximum area.

Your answers should have an absolute or relative error of at most 10^{-6}.

Sample Input 1	Sample Output 1
5 1 27 2 67 8 1000 10 25 7278 753936335	33.3084424754024 223.59324298054216 66096.3389106506 0 45141982491296061.7734375