

Problem WELIKETRAINS: We Like Trains

After last year's iteration of the NWERC regional contest, the three FAU teams ("little eleFAUnt has array", "ACK" and "I LIKE TRAINS 🚆🚆🚆🚆🚆") went back from Linköping to Nürnberg by plane via Amsterdam. Due to a strong storm, the landing approach to Amsterdam took a lot longer than expected. While some passengers noted that going by train would obviously have been a lot more comfortable, others were starting to play with their smartphones GPS function to find out about their current course and estimated arrival time. Unfortunately, due to the bad weather, the GPS worked really poorly and they only managed to get two GPS positions with a few minutes of time between them. Given the coordinates the airplane was at at the times the GPS worked and the position of the runway threshold, can you find out how far away of the runway the plane is going to touch the ground, assuming it is moving continuously in the same direction since the first position was obtained?

The Amsterdam airport is at height 0, and you may assume the ground to be a flat plane (Amsterdam is in the Netherlands, after all).

Input

The input consists one line only, containing the coordinates of the first GPS position $0 \leq p1_x, p1_y, p1_h \leq 2000$, the second position $0 \leq p2_x, p2_y, p2_h \leq 2000$ and the position $0 \leq a_x, a_y \leq 2000$ of the runway threshold. $p1$ and $p2$ are guaranteed to differ in at least one component.

Output

Output a single number, how far away from the runway threshold the aircraft touches the ground. Your answer must be correct up to an absolute or relative tolerance of 10^{-6} . In case the aircraft is not going to land at any time soon, output the sentence: WE LIKE TRAINS

Sample Input 1

5 5 5 3 3 3 0 0

Sample Output 1

0

Sample Input 2

5 5 5 3 2 3 0 0

Sample Output 2

2.5

Sample Input 3

5 5 5 4 4 5 0 0

Sample Output 3

WE LIKE TRAINS