Quick Race

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Description

In minecraft we can fly using the elytra with a rocket as fuel. Given 3 coordinates A, B, and C in a 3d space, I must fly starting from point A to C where I can stop (not a must) at point B. There are rA number of rockets that I can get at point A and rB number of rockets that I can get at point B. The maximum distance that can be traveled using a rocket is RD. For example if RD is 100 and I have 3 rockets then I can travel a maximum of 300, if I want to travel 50 then I can use 1 rocket and have 2 rockets remaining.

Input Format

Three lines which consists of coordinate at x, y, and z axis in that order. First line is for point A, second line is point B, and third line is point C. Last line is rA, rB, and RD.

Output Format

If I can fly from A to C without stopping then output "`NAH ID WIN, NO NEED TO STOP`", but if I stop at B and can still reach C then output "`HHM BETTER TAKE ROCKET, STILL CAN WIN`". If I cannot reach C even when taking rockets at B then output "`GIVE UP ALREADY, MINING BETTER`".

Rules and Constraints

- $x, y \in [-2147483648, 2147483647], z \in [-64, 320]$
- $rA, rB \in [0, 10^3]$
- $RD \in [10, 10^3]$

- Point $A \neq B$, point $A \neq C$, point $B \neq C$

Example 1

Input
100 100 100 250 250 250 800 800 800 20 10 100
Output
NAH ID WIN, NO NEED TO STOP

Example 2

Input
100 100 100 250 250 250 800 800 800 3 10 100
Output
HHM BETTER TAKE ROCKET, STILL CAN WIN

Example 3

Input
100 100 100 250 250 250 800 800 800 3 1 100
Output
GIVE UP ALREADY, MINING BETTER

Hint

- Extra hint *might* be given at the last day (idk the time, I'll update the pdf)