Problem Description:

After Eran is Titanizing,he stands still and it is no sign for him to continue the plan.So the plan changes:Mikasa must reaches Eran as quick as possible.

The map of the battlezone is a n\*m grid which has marks of alphabet.’G’means ground,’B’ means building,’T’ means a Titan here stands still and ‘E’ means the position of Eran who is standing still.(Due to the height of Titans,Titans and Eran are regard as building)

Since Mikasa is the graduate of the Training Legion,she is able to use a spectial equipment,called Three-dimensional Mobile Device.This device combined blades,hooks,gas tanks and allows her moves in three ways below:

Run:Move 1 grid up or down or left or right,but can only move from ground to ground or from building to building.This action costs 3 seconds and consumes no gas.

Jet:Move 1 grid up or down or left or right ignoring the terrain type.This action costs 1 second and consumes 2 gasses.

Hook:A 8-way knight moves(the movement of knights on chessboard),but can only land on buildings. This action costs 2 seconds and consumes 1 gas.

But there are aslo some Titans in the way.If her lands on a Titan,she have to fight with it (not mean kill it)and consumes 1 blade.That is to say,if she has no blade,she can not lands on a Titan.

Now with the map of the battlezone and the initial position of Mikasa,you task is calculate the minimum time that Mikasa costs to reach Eran.

Input:

The input consists of multiple test cases:

Frist line contains two integers N and M,means the length and width of grid. (1<=N,M<=20)

Second line contains four integers X Y B G,means the initial position,blades and gasses of Mikasa. (1<=X<=N,1<=Y<=M,0<=B<=5,0<=G<=20)

Then N lines follows,each line contains M alphabet,means the details of the grid.

Output:

For each test cases,output an integer,the minimum time that Mikasa costs to reach Eran.

If she can not reach him,output “Eran!!” without quotation.

Simple Input:

4 4

1 1 0 2

BBBG

GGBG

BGTT

GGGE

4 4

2 1 0 0

BBBG

GGBG

BGTT

GGGE

4 4

1 4 1 2

BBBG

GGBG

BGTT

GGGE

4 4

4 1 0 1

BBBG

GGBG

BGTT

GGGE

Simple Output:

4

Eran!!

7

8