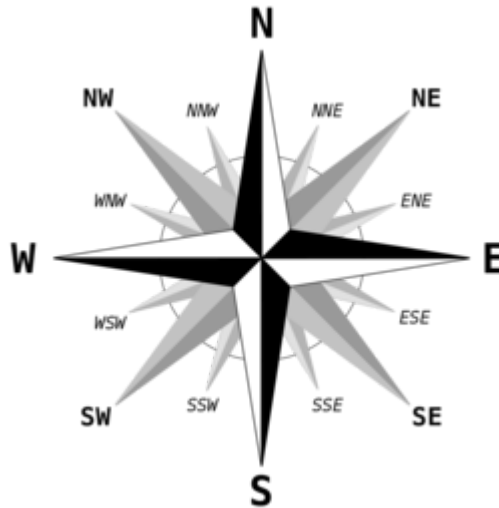# A. Rose

time limit per test: 0.25 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

Rose has two pet points in $\mathbb{Z}^2$ that she affectionately calls P_1 and P_2. Rose's eccentric friend Esor asks Rose, "if you were to draw an arrow starting from P_1 and ending at P_2, what is the closest cardinal direction to the arrow?"

Help Rose create a program to determine this.

Challenge: *Rose thinks that trigonometric functions are no fun. Don't use any.*

Input

Let $P_1 = (x_1, y_1)$ and $P_2 = (x_2, y_2)$. $P_1, P_2 \in [-\lceil (\pi e \varphi)^{7/4} \rceil, \lceil (\pi e \varphi)^{7/4} \rceil]^2 \cap \mathbb{Z}^2$, where φ is the golden ratio and $P_1 \neq P_2$.

The input consists of a single line: $x_1 \ y_1 \ x_2 \ y_2$

Output

One of $\{N, NNE, NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW, NNW\}$.

Examples

input
1 2 3 4
output
NE

input
0 1 1 0
output
SE