2020 交大附中夏校结业考核附加题

施想

题目:

Farmer John has been informed of the location of a fugitive cow and wants to catch her immediately. He starts at a point N ($0 \le N \le 100,000$) on a number line and the cow is at a point K ($0 \le K \le 100,000$) on the same number line. Farmer John has two modes of transportation: walking and teleporting.

* Walking: FJ can move from any point X to the points $X-1$ or $X+1$ in a single minute
* Teleporting: FJ can move from any point X to the point $2*X$ in a single minute.

If the cow, unaware of its pursuit, does not move at all, how long does it take for Farmer John to retrieve it?

输入：

Line 1: Two space-separated integers: N and K

输出：

Line 1: The least amount of time, in minutes, it takes for Farmer John to catch the fugitive cow.

示例 1：

输入 5 17

输出 4

提示：

The fastest way for Farmer John to reach the fugitive cow is to move along the following path: 5-10-9-18-17, which takes 4 minutes.

(2007 USACO Silver)

Time Limit: 2000MS **Memory Limit:** 65536K