Missing Goldfish

Problem Statement:
Bessie lost her pet goldfish in her school! Her school is arranged in a series of classrooms and hallways, with N classrooms numbered 0 to N-1, and M hallways, each with a length of 10 meters. Hallways connect two classrooms in any direction. Bessie knows the arrangement of classrooms and hallways in her school, and the room where she lost her goldfish G. However, always being a perfectionist, she wants to compute the minimum distance that she will have to travel to reach her goldfish, starting from classroom 0.

Input Format:
Line 1: N M
Line 2: G, representing the number of the classroom with the goldfish
Line 3..M+2: 2 numbers, A and B (0 <= A < B < N), with A and B representing two classrooms directly connected by a hallway.

Example Input:
5 5
4
0 1
1 2
2 3
3 4
1 4

Flag Format:
mctf{m1s5INg_G0ldf1sH_[ANSWER]}
[ANSWER]: an integer representing the minimum distance

Example Flag:
mctf{m1s5INg_G0ldf1sH_20}

Answer Explanation:
Step 1: 0 -> 4, 10 total meters
Step 2: 1 -> 4, 20 total meters