

There is a monkey at the door into a room. In the middle of the room a banana is hanging from the ceiling. The monkey is hungry and wants to get the banana, but he cannot stretch high enough from the floor. At the window of the room there is a box the monkey may use. The monkey can perform the following actions:

1. walk on the floor, provided it is standing on the floor;
2. climb the box, provided it is standing on the floor next to the box;
3. push the box to some other location, provided it is standing on the floor next to the box;
4. grasp the banana, provided the box is in the center of the room and it is standing on the box.

Can the monkey get the banana? More importantly, what series of actions does the monkey need to follow in order to get the banana?