I have three containers of marbles. One container has only black marbles, and one has only white marbles. The third container has an equal number of white and black marbles (and each container has the same number of marbles). I've switched the labels so that each container is now marked incorrectly. Your task is to correctly label the containers without looking inside them.

You are allowed to reach in any container and pick out one marble. If you can't assign correct labels to all three containers, you can select a second marble from any container. Again, if you can't correctly label all three containers, you can keep withdrawing one marble at a time from any container until you can correctly label all three. What is the smallest number of marbles you must examine in order to correctly label all three containers. Be sure to explain your strategy, and explore all possible outcomes.