

Since all three boxes are mislabeled, it should only take one draw to correct the mistake. I would pick one marble (say it was red) from the box labeled mix. It cannot be blue (because the marble picked was red) and it cannot be the mix (because the box was falsely labeled mix) so it must be the red box. That will leave the box labeled red and the box labeled blue, which contain either the mix or the blue marbles. Since the blue marbles cannot be in the box labeled blue, it is safe to assume that the "blue" box will contain the mix marbles. This leaves the box labeled red containing the blue marbles.

The same logic applies if the marble picked was blue.