Suppose you live at the origin 0.0 and wish to travel to 1.0 but you always travel a distance to your destination which is a fraction a/b. For example Mr. Halfway always travels ½ of the way; so a = 1 and b = 2.

Once you receive your fractional distance you turn around and head back to where you just left from. Again you only go a/b of this distance. Then you stop, turn around, and so on.

Where do you end up? (This should be an expression in terms of a and b)

What if a and b are both 1?

What if a is greater than b?

What if you make the clock run backwards: Where did you come from originally?

If a is greater than b does it help you to run the clock backwards?