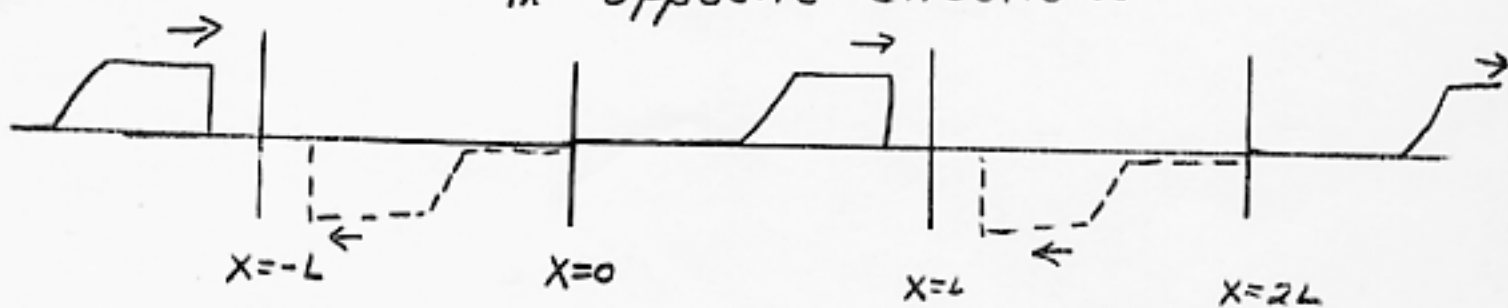


pulse of the proper shape at $t=0$ & propagating to the right. To find the behavior for all time, we imagine that the string is extended ∞ far in both directions. Thus the solution is a sum of

two ^{sets of} periodic pulses propagating in opposite directions.

$t=0$



Conditions (a), (b), and periodicity guarantee that the initial conditions are satisfied, the wave equation is satisfied, & the boundary conditions are satisfied. Thus, this is the unique solution. To find the configuration at any time, we merely move the pulses to the left & right & add them up.