

## Exercise 11

Show by direct substitution that  $u(x, t) = h(t - x/c)$  for  $x < ct$  and  $u(x, t) = 0$  for  $x \geq ct$  solves the wave equation on the half-line  $(0, \infty)$  with zero initial data and boundary condition  $u(0, t) = h(t)$ .