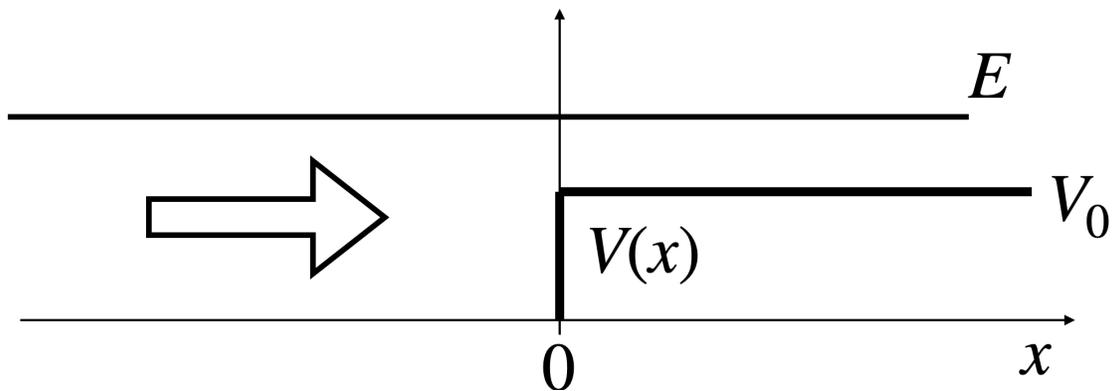


# PHYS2063 Wave Physics Homework #20 Due Thursday 10 Nov 2022

*This homework assignment is due at the start of class on the date shown. You may submit a PDF of your solutions to the Canvas page for the course, or bring a paper copy to class.*

Finish the problem we started in class, namely that of a particle wave incident from the left on a square potential step of height  $V_0$  at  $x = 0$  and with energy  $E > V_0$ :



That is, find the reflection and transmission coefficients  $R$  and  $T$  as a function of  $E/V_0$  and show that  $R + T = 1$ . Make plots of  $R$  and  $T$  as a function of  $E/V_0$ . Comment on the behavior as  $E/V_0 \rightarrow \infty$  and  $E \rightarrow V_0$ .