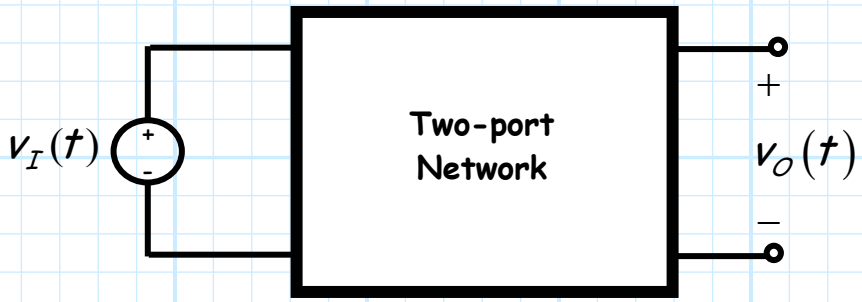
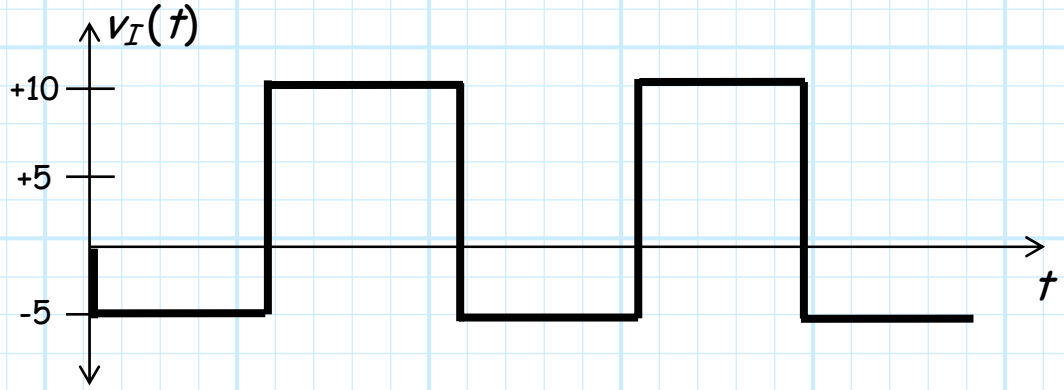
Special Problem 3.5-12

A two port network has at its input the signal $v_I(t)$, plotted below:

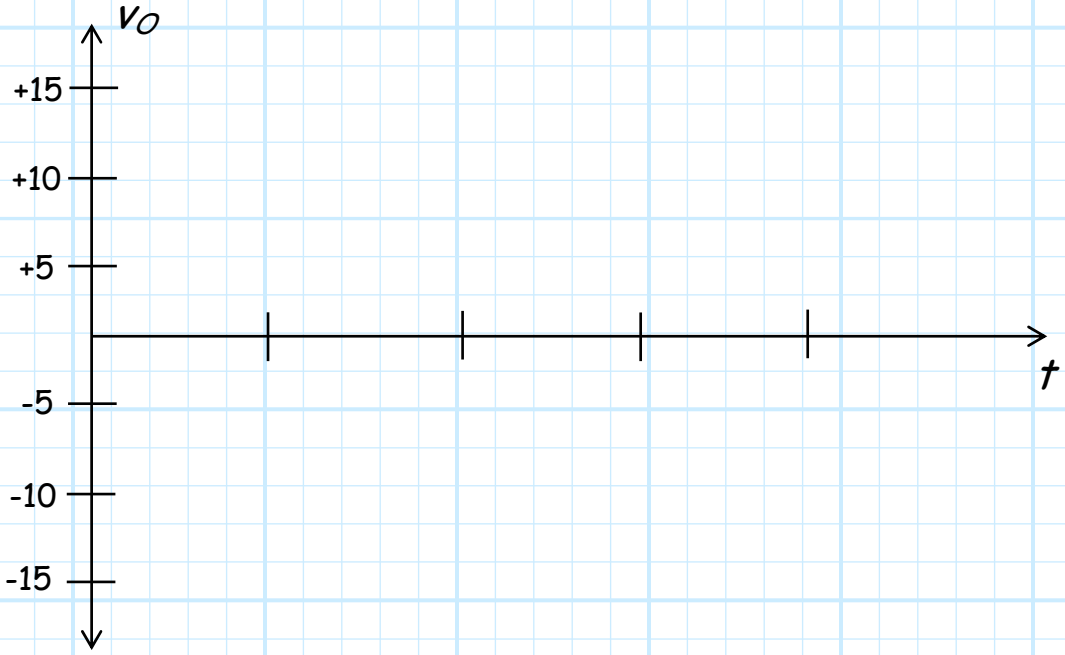




1. Say the network is an **IDEAL half-wave rectifier.** Carefully plot the output voltage on the graph below

TURN THE PAGE !!!

2. Say the network is an **IDEAL full**-wave rectifier. Carefully plot the output voltage on the graph below



3. Say the network has the transfer function shown below Carefully plot the output voltage on the graph below.

$$v_0(t) = \begin{cases} -5.0 & \text{if} \quad v_I > 5 \\ v_I - 10.0 & \text{if} \quad v_I < 5 \end{cases}$$