

## 0.1 Low-Pass Filter Response Harmonic Reconstruction

Below a simple RC-Low-Pass Filter circuit is shown, along with it's input  $v_i(t)$ . The math needed to exactly construct its output is dealt with in the figure file(s).

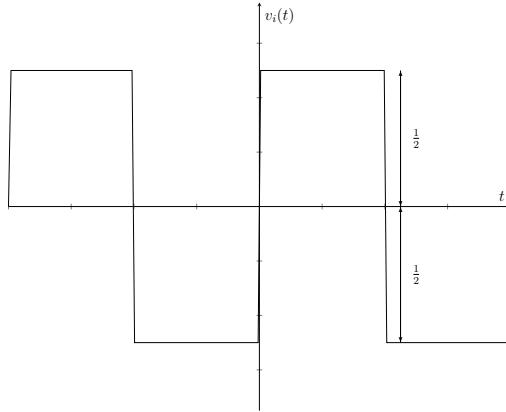


Figure 1: Input Signal  $v_i(t)$

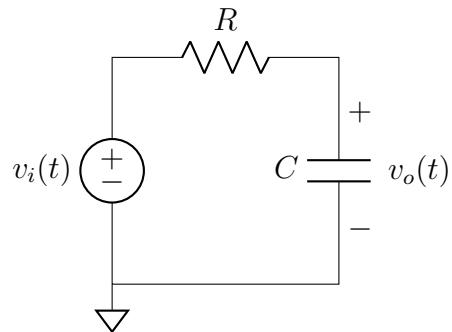


Figure 2: Time Domain Low-Pass Filter Circuit

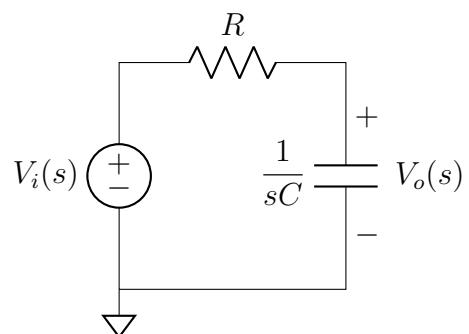


Figure 3: Laplace Domain Low-Pass Filter Circuit

The reconstruction plot takes a while to render, it has been commented out! Feel free to add it back in, and change the parameters.