第三章作业：3.2, 3.3, 3.8, 3.13, 3.15, 3.22(a(a)),3,34(a),3.48(a)(b)

Discussion problem assignment:

问题一：

For LTI systems defined in Example 2.14 and 2.15, determine the system function for each system.

第二题：

An rectifier system is defined as $y(t) = \begin{cases} x(t), x(t) > 0 \\ 0, x(t) < 0 \end{cases}$. Assume the input signal is the electric supply

$x(t) = 220V \times \cos(2\pi \times 50 \times t)$ working at a frequency of 50 Hz. Prove that the output signal $y(t)$ is periodic and

determine the Fourier series a_0 for $y(t)$. Confirm that the system is not an LTI system.