Suppose that a certain passive
circuit—containing resistors, capacitors, and inductors—
is connected to a square-wave voltage source. What
procedure would you use to analyze the voltages and currents in the circuit?

1. Using Fourier series, a square wave can be expressed as a sum of sinusoids at the frequency of the square wave and its harmonics.
2. For each component of the Fourier series becomes a source, and the circuit can be analyzed using phasor analysis.
3. Using the superposition principle, we can add the solutions due to all of the harmonics, thereby constituting the total solution.