

TECHNIQUES	WHEN TO USE THEM
KCL, KVL and Ohms law	Simple circuits, tackle small part of larger problem Relate currents, voltages, help reduce unknowns
Series/Parallel resistors	Simplify a resistive network, fewer unknowns Finding RC/RL time constant Finding Rth and Zth when indep sources only
Voltage dividers current dividers	Help find voltage across one of several series Rs Help find current through one of two parallel Rs $I_a = I_{total} * R_b / (R_a + R_b)$
Nodal Analysis	Solve a circuit with several unknown voltages Op-Amp circuits Circuits with many parallel components
Mesh Analysis	Solve a circuit with several mesh currents Circuits with many series components, "loopy ccts"
Source Transforms	Careful. Small simplifications of extra components
Thevenin and Norton	Find out how much power a load might get Determine Impedance for max power transfer to load Remove a component and get simpler circuit, to solve, add back When finding RC and RL time constants, Reffective for a inductor or capacitor
Turn off indep sources and find Thevenin impedance using external applied source	Circuit with dependent sources
Superposition	When multiple independent sources
First and second order step response	Transient response to a change in circuit
AC response (phasors)	Sinusoidal steady state response to an alternating current or voltage
AC Power	Power analysis, getting max power to a load Load balancing
Frequency response	