Lec 02 -- 2 Ports and Dynamics

How do you make a Thevenin model of a circuit containing inductors or capacitors?

What is a passive network?

What two things must be true of a network for it to be modeled as a 2 port?

What are the four terminal variables in a 2 port network?

Write the matrix representation of z-parameters

What are ways to avoid doing two port modeling

Draw the our two port amplifier model. Why did we derive this model?

Write down the initial and final value theorems

Dynamics

What are two quick methods for finding the dynamics of a circuit?

How do Thevenin models relate to time constants? What is the constraint on this relationship?

What is the average value of an output node driven by a capacitively coupled voltage source?

What is capacitive feedthrough? Does it describe a time or frequency domain phenomenon?

What is a capacitive divider

Draw the internal structure of an oscilloscope probe and describe why it is useful for measuring high frequency signals.