Question 1

Calculate:

- The equivalent capacitor between nodes A & B.
- If the switch is closed at $t = 0+$ find the voltage and current at node A at $t = 0+$.
- Final voltage and current

```
V = 20v
```

Question 2

Calculate:

- The equivalent inductance between nodes A & B.
- If the switch is closed at $t = 0+$ find the voltage and current at node A at $t = 0+$.
- Final voltage and current

```
V = 20v
```
Question 3:
Inductance of the bond wire of a memory chip is 10nh. This induces a noise voltage of 5v. How much inductance you will add to reduce the noise voltage to 2.5v? Will this be in series or parallel?

Question 4:
If it takes 10 seconds for the power supply to ramp up to the final voltage of 10v, what is the peak current the power supply has to supply, assuming the capacitance of the laptop is 10 farads. What is the final current?