



In the circuit shown above

$$V = 10 \text{ V}$$

$$R = 5 \Omega$$

$$L = 10 \text{ mH}$$

At $t = 0 \text{ s}$, the switch is closed.

1. What is the initial current in the circuit?
0 A
2. What is the initial voltage across the resistor?
0 V
3. What is the initial voltage across the inductor?
10 V

After a “long time” the circuit reaches a steady state.

4. What is the current?
2 A
5. What is the voltage across the resistor?
10 V
6. What is the voltage across the inductor?
0 V
7. Sketch a graph of I vs. t for this circuit.

