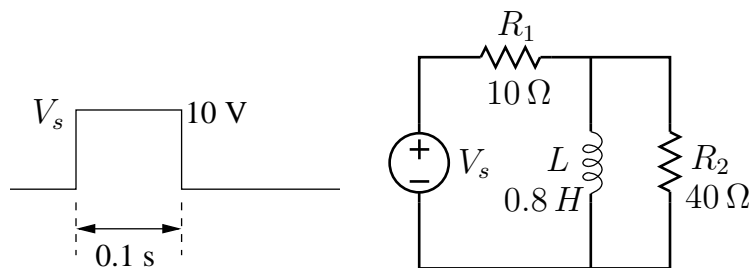`ee101_rl1.sqproj`

Shown in the figure is an RL circuit driven by a voltage pulse. Assume that the initial inductor current is zero.

Exercise Set

1. Obtain expressions for the inductor current and the voltage across R_2. Check your results with simulation.

2. How will the inductor current transient change if

   (a) R_1 is changed from $10\,\Omega$ to $40\,\Omega$?

   (b) R_2 is changed from $40\,\Omega$ to $20\,\Omega$?

   (c) L is changed from $0.8\,H$ to $2.0\,H$?

   (d) The high level of V_s is changed from $10\,V$ to $5\,V$?

   Verify with simulation.