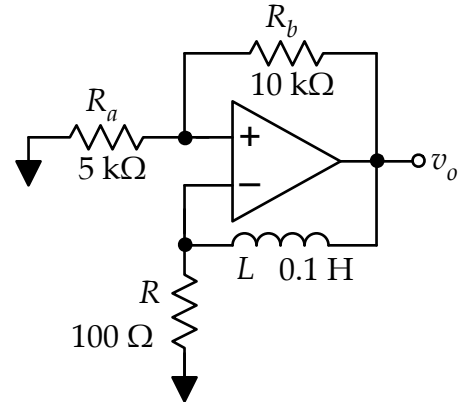


Although it would be uncommon, it is certainly conceivable to use RL transients to control the frequency of an inverting-type non-linear oscillator, as shown at right.

The op-amp has saturation levels at $V_{L+} = +10\text{ V}$ and $V_{L-} = -10\text{ V}$.

Calculate the oscillation period for the circuit.



(Recall from 201 that we usually discuss the inductor transient in terms of the inductor *current*. You can switch the inductor current transient equation learned in 201 over to an equivalent voltage equation. Or you can describe the switching levels of the comparator in terms of the amount current flowing in the resistor / inductor. For example, how much current will be flowing in the resistor when $v_- = V_{TL}$? Of course, the resistor current is the same as the inductor current. Once you know the inductor currents at the switching levels, you can calculate how long it takes the exponential in the RL transient equation to ramp from level to the other.)

$T =$ _____