Chapter 7, Problem 89.

An *RL* circuit may be used as a differentiator if the output is taken across the inductor and $\tau << T$ (say $\tau < 0.1\ T$), where T is the width of the input pulse. If R is fixed at 200 kΩ, determine the maximum value of L required to differentiate a pulse with $T = 10\ \mu s$.