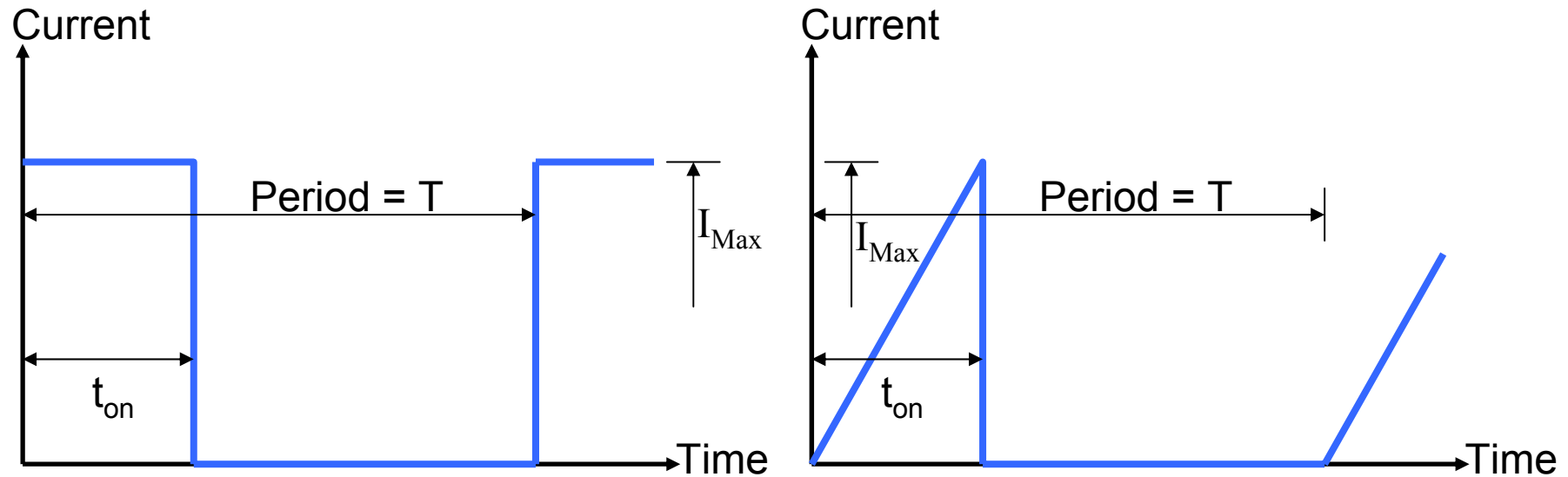


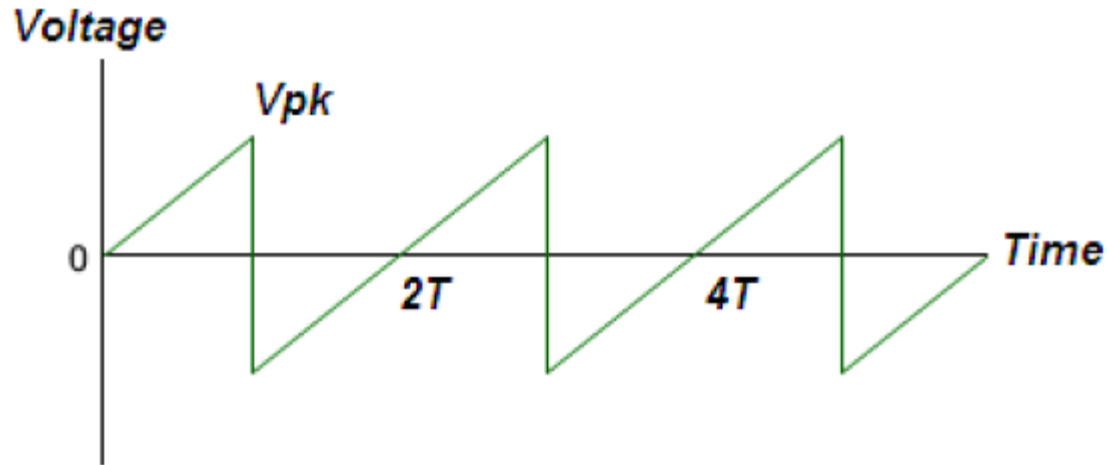
Tutorial 1 – Questions.

1. Derive expressions for the average and RMS values for the waveforms shown in terms of their maximum values and duty cycle. For duty cycle $\phi = 10\%$, what is the form factor for each?



2. Plot the current vs. time and energy vs. time graphs for an inductor of 500mH subject to a current of $i(t) = 1.2t$; $0 < t \leq 10$ seconds.

3. Find the RMS value for a voltage defined as the following saw-tooth function over an interval $[0, 2T]$:



if the peak value of this voltage is 200V, then what is the approximate RMS value.