HOMEWORK #12 answers

1. $w_C = 28.125$ mJ
2. $i(t) = 22.5\text{ mA} + (15\text{ mA} - 22.5\text{ mA})e^{-t/0.25\text{s}}$
3. $i(t>0) = \dfrac{v_s}{R_2 + R_3}\left[1 - e^{-t/(L/(R_2+R_3))}\right]$
4. a) $R_L = 20\ \Omega$

   b) $p_{\max} = 31.25$ W
5. $v_1 = [i_s(R_2 - \beta) + v_s]\dfrac{R_3}{R_2 - \beta + R_3}$