



$$i_2(DT_B) = I_1$$

$$i_2(DT_B + t_2) = 0 \quad \text{0.50?}$$

$$V_{L2} = 0 - \left( V_{IN} - \frac{V_{OUT}}{n} \right)$$

$$V_{L2} = \frac{V_{OUT}}{n} - V_{IN}$$

$$V_{OUT} = n \frac{D}{1-D} V_{IN}$$

$$V_{L2} = \frac{D}{1-D} V_{IN} - V_{IN} = \frac{D - 1 + D}{1-D} V_{IN}$$

$$V_{L2} = \frac{2D - 1}{1-D} V_{IN}$$

CHECK:  $D=0 \quad V_{L2} = -V_{IN} \quad \checkmark$

$D = \frac{1}{2} \quad V_{L2} = 0 \quad \checkmark$

seems to be okay

$$L_0 \frac{d i_{L_0}}{dt} = v_{L_0}$$

$$L_0 \frac{0 - I_1}{t_0} = \frac{2D-1}{1-D} v_{in}$$

$$t_0 = -I_1 L_0 \frac{1-D}{2D-1} \frac{1}{v_{in}}$$

$$t_0 = \frac{L_0 I_1}{v_{in}} \frac{1-D}{1-2D}$$

НЕ ПРЕТЕРЯВАЙТЕ СЯ D! КАДА ЖЕ  $D = \frac{1}{2}$

НЕМА КАДА ДА СЕ УСПРАЗЪЛ  $L_0$ ,

КАКО И КА  $L_0$  ЖЕ  $\phi$ . ШТА СЕ ТАКА  
ДОКАЖА? HINT: ПОГЛЕДАЙТЕ КАКО

$i_{L_0}$  УТИЧЕ НА СТРУЖЪТ ДУМДЕ!