4. [10 points] The cable of a suspension bridge with two supports $2L$ meters apart hangs H meters above the ground. The height H is given in terms of the distance in meters from the first support x (in meters) by the function

$$H(x) = e^{x-L} + e^{L-x} + H_0 - 2$$

where H_0 and L are positive constants. Notice that x ranges from 0 (the first support) to $2L$ (the second support).

    a. [4 points] Find (but do not classify) the critical points for the function $H(x)$.

    b. [6 points] Find the x and y coordinates of all global maxima and minima for the function $H(x)$. Justify your answers.