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.