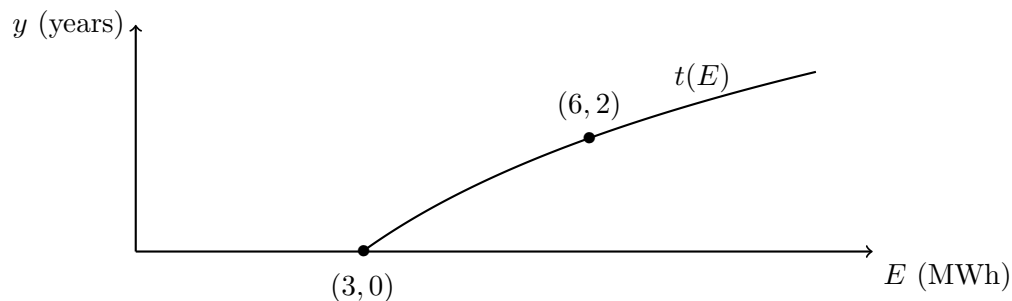


4. [7 points] Mad scientist Kiki LeBlanc is analyzing the amount of energy she needs to run another one of her time machines named Machine1. Below is a graph of $y = t(E)$, the number of years into the past or future she can send a 1 kg notebook when the energy consumption of Machine1 is E megawatt-hours (MWh).



- a. [4 points] The function $t(E)$ (assuming the domain is $E \geq 3$) can be written in the form $t(E) = a \log(E) + b$ for some constants a and b . Given the information in the graph, find a and b in **exact** form.

$a =$ _____.

$b =$ _____.

- b. [3 points] Give a practical interpretation of the point $(6, 2)$ on the graph.