3. [5 points] A colony of bacteria triples in size every 6 days. What is the doubling time of this colony? (Show your work step-by-step, give your final answer in **exact form**, and *include units.*)

Answer: _____

4. [6 points] Let $G(m)$ be the mass (in grams) of the garbage in a dumpster m minutes before 8 am. For each of the functions below, find a formula by applying one or more appropriate transformations to the function G. (*In each case, your final answer should be a formula involving G.*)

a. [2 points] Let $K(m)$ be the mass (in **kilograms**) of the garbage in the dumpster m minutes before 8 am.

Answer: $K(m) =$ _____.

b. [2 points] Let $L(h)$ be the mass (in kilograms) of the garbage in the dumpster h **hours** before 8 am.

Answer: $L(h) =$ _____.

c. [2 points] Let $T(h)$ be the mass (in kilograms) of the garbage in the dumpster h hours before **11 am**.

Answer: $T(h) =$ _____.