3. [10 points] Let $G(v)$ be the number of minutes it takes Goober the gorilla to eat a meal consisting of v pounds of vegetation.

a. [2 points] Suppose b and n are positive constants.
Give a practical interpretation of the equation $G^{-1}(b) = n$ in the context of this problem.
Use a complete sentence and include units.

b. [4 points] Suppose that there are positive constants c and d so that a formula for $G(v)$ is given by

$$G(v) = cv^d.$$

If $G(2) = 9$ and $G(3) = 18$, find the *exact* values of the constants c and d.

Answers: $c =$ _____ and $d =$ _____

c. [4 points] Suppose that the number of minutes it takes Goober's friend Toober to eat a meal consisting of v pounds of vegetation is $m = T(v)$, which is given by the formula

$$T(v) = q + \frac{\ln(v+2)}{\ln(5)}$$

for some constant q. Find a formula for $T^{-1}(m)$. *Show your work carefully.*
Note that your answer should be in exact form and be given in terms of m and q.

Answer: $T^{-1}(m) =$ _____