5. [12 points] Percy is analyzing the cost of feeding the animals on his uncle’s farm.
- Suppose $W(p)$ is the total amount of pig food, in pounds, consumed by $p$ pigs each day.
- Suppose $C(x)$ is the cost, in dollars, of $x$ pounds of pig food.
- Suppose there are $N$ pigs on the farm on May 1.
- Suppose the cost of the food consumed by the goats on May 1 was $K$ dollars.

a. [6 points] Write a practical interpretation of the following expressions.

- $C(W(37))$ is the cost, in dollars, of the food consumed by 37 pigs in one day.

- $W^{-1}(111)$ is the number of pigs that consume 111 pounds of food in one day.

b. [6 points] For each description below, write an expression using function notation and possibly the numbers $K$ and $N$ from above that gives the quantity described. Circle your answers.

- The average amount of food, in pounds, consumed per pig on the farm on May 1.
  \[ \text{Solution: } \frac{W(N)}{N} \]

- The cost of $z$ ounces of pig food. (Hint: There are 16 ounces in one pound.)
  \[ \text{Solution: } \frac{C(z)}{16} \]

- The total cost, in dollars, of the goat food and the pig food consumed by the animals on May 1.
  \[ \text{Solution: } C(W(N)) + K \]