

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.

$$C(W(37))$$

$$W^{-1}(111)$$

- 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.

The cost of  $z$  ounces of pig food. (*Hint: There are 16 ounces in one pound.*)

The total cost, in dollars, of the goat food and the pig food consumed by the animals on May 1.