

2. [10 points] The Executive Director of the Go Blue Zoo is managing the zoo's finances. She tracks the following functions:

- $O(n)$ is the number of pounds of fish per day used to feed n otters.
- $P(m)$ is the number of pounds of fish per day used to feed m penguins.
- $F(s)$ is the cost, in dollars, of s pounds of fish.

a. [6 points] For each of the following, describe the meaning of the expression or equation in the director's context, or explain why the expression or equation doesn't make sense.

(i) $O(6) = 70$

(ii) $O^{-1}(P(8))$

(iii) $P(10) + F(10)$

b. [4 points] For each of the following statements or quantities, write an equivalent mathematical expression or equation, or explain why there isn't enough information to do so.

(i) To feed its 5 otters and 8 penguins, the zoo uses 86 pounds of fish per day.

Expression or Equation: _____

(ii) The daily cost, in dollars, of feeding 5 otters.

Expression or Equation: _____