1. Let the universe be the set of people. Define the predicates $O(x, y)$ to be “$x$ is older than $y$,” $A(x)$ to be “$x$ is an adult,” and $B(x)$ to be “$x$ is a baby.” Translate the following (nonsensical) sentences into logical expressions.

(a) There is an oldest person.
(b) Everybody is older than someone.
(c) No one is older than himself.
(d) All adults are older than all babies.
(e) Either everyone is an adult or everyone is a baby.
(f) Everyone is either an adult or a baby.

2. Again let the universe be the set of people. Using the constants $b$ for “my baby” and $m$ for “me,” and the predicate $L(x, y)$ for “$x$ loves $y$” translate the sentence “Everybody loves my baby but my baby only loves me” into logical expressions.