Let $S$ be the set of people in the class. Define predicate $F(x, y)$ to mean that person $x$ considers person $y$ to be their friend. Note that friendship here is NOT inherently mutual. That is, I might consider someone my friend who may not consider me their friend. Translate the English description of each predicate or proposition into a logical formula using quantifiers.

a) Proposition $p$ that states that there is some super likable person in the class that everyone considers their friend.

b) Proposition $q$ that states that everyone in the class has at least one person they consider to be their friend.

c) Proposition $r$ that states that there is a mutual friendship in the class. That is, there are two people that consider each other to be their friend.

d) Predicate $A(x)$ that states that person $x$ considers more people to be their friend than anyone else in the class.

e) Predicate $B(x, y)$ states that everyone who considers person $x$ to be their friend also considers person $y$ to be their friend.