

1. Let $R(x, y)$ represent the statement: *cat x respects cat y*. Translate each of the following and write your answer in a manner that is as colloquial as possible.
- $\forall x \exists y R(x, y)$
 - $\forall y \exists x R(x, y)$
 - $\exists x \forall y R(x, y)$
 - $\exists y \forall x R(x, y)$
 - $\forall x (\exists y R(x, y) \wedge (y \neq x))$
 - $\forall x (\exists y R(x, y) \rightarrow (y \neq x))$
2. Let $R(x, y)$ represent the statement: *cat x respects cat y*. Translate each of the following using quantifiers:
- No cat respects itself.
 - No cat is respected by all others.
 - All cats respect only themselves.
 - If a cat respects another, then that is the only cat it respects.
 - Every cat respects only one other cat.
 - If my cat Pythagoras respects my other cat Jolie, then he respects all other cats.