- $R(n, m) \equiv$ every natural number less than m divides n
- $T(n, m) \equiv$ there is a natural number less than m that divides n
- $W(n, m) \equiv n$ and m are not siblings
- $K \equiv$every parent has at least two children
- Rewrite $\neg(\exists x\colon P(x))$ using $\forall$, rewrite $\neg(\forall x, P(x))$ using $\exists$

$(m|n \ \equiv m$ divides $n)$ $(M(x, y) \ \equiv x$ is y's parent, S is set of all people)

- $R(n, m) \equiv$ every natural number less than m divides n
  - $\forall p \in \mathbb{N}, p < m \rightarrow p|n$
- $T(n, m) \equiv$ there is a natural number less than m that divides n
  - $\exists p \in \mathbb{N}: p < m \wedge p|n$
- $W(n, m) \equiv n$ and m are not siblings
  - $\neg(\exists p \in S: M(p, n) \wedge M(p, m))$
- $K \equiv$every parent has at least two children
  - $\forall x \in S, \left(\exists z \in S: M(x, z)\right) \rightarrow \exists w \in S: (w \neq z \wedge M(x, w))$
- Rewrite $\neg\exists x: P(x)$ using $\forall$, rewrite $\neg\forall x, P(x)$ using $\exists$
  - $\forall x, \neg P(x)$. $\exists x: \neg P(x)$