

3). ~~Handwritten~~

(a) ~~owns~~ Han Solo, Millennium Falcon).

(b) $\neg \text{happy}(PL)$

(c) loves (PL, HS)

(d) $\forall x \left(\left(\text{owns}(x, ML) \rightarrow \neg \text{happy}(x) \right) \right)$
 $\Rightarrow \text{visits}(x, OWK).$

(e) $\forall x \left(\text{visits}(x, OWK) \Rightarrow \text{wise}(x) \right).$

(f) $\forall x \left(\text{owns}(x, MF) \wedge \text{visits}(x, OWK) \right)$
 $\Rightarrow \text{teaches}(OWK, x, LS)$

(g) $\forall x \left(\left(\neg \text{happy}(x) \vee \text{owns}(x, MF) \right) \wedge \right.$
 $\left. \text{teaches}(OWK, x, LS) \right) \Rightarrow \text{joins}(x, RA).$

(h) $\forall x, y$
 $\left(\left(\neg \text{happy}(x) \wedge \text{loves}(x, y) \right) \right)$
 $\Rightarrow \text{declares}(x, y).$

(i) $\forall x, y$
 $\left(\text{teaches}(OWK, x, LS) \wedge \text{declares}(y, x) \right)$
 $\wedge \text{wise}(y) \Rightarrow \text{friend}(x, Chewbacca)$