

PHIL. 225 - SYMBOLIC LOGIC

FINAL REVIEW

POSSIBLE ANSWERS - 8

$D = \{x \mid x \text{ is a person}\}$

$M = \{x \mid x \text{ is a model}\}$

$P = \{x \mid x \text{ ~~seeks~~ will seek high political office}\}$

$E = \{x \mid x \text{ enjoys success}\}$

$C = \{\langle x, y \rangle \mid x \text{ congratulates } y\}$

$F = \{\langle x, y \rangle \mid x \text{ feels good about } y\}$

$S = \{x \mid x \text{ ~~succeeds~~ succeeds}\}$

$L = \{\langle x, y \rangle \mid x \text{ loves } y\}$

$p$ : Paris Hilton

$a$ : Alie

2a)

1  $\forall x [\exists y (My \wedge Lxy) \rightarrow \neg Px]$

2  ~~$\forall x (Mx \wedge Px)$~~   $\exists x (Mx \wedge Px)$

MW 3  $\forall x (Px \rightarrow Lxx)$

4  $\boxed{a}$   $Ma \wedge Pa$

5  $Pa \rightarrow Laa$  3  $\forall$ -elim

6  $\exists y (My \wedge Lay) \rightarrow \neg Pa$  1  $\forall$ -elim

7  $\neg \exists y (My \wedge Lay)$  4, 6 TC

8  $\forall y \neg (My \wedge Lay)$  7, QE

9  $\neg (Ma \wedge Laa)$  8,  $\forall$ -elim

10  $\perp$  4, 5, 9 TC

11  $\perp$  2, 4-10  $\exists$ -elim

12 MW  $\perp$ -elim (or TC)