

PHIL. 225 - SYMBOLIC LOGIC

FINAL REVIEW

POSSIBLE ANSWERS - 10

3)(1)a)	1	$\exists x \exists y Fxy$	
$\forall x \forall y Fxy$	2	$\forall x (\neg \forall z Fxz \rightarrow \forall y \neg Fyx)$	
	3	\boxed{cd}	
	4	$\boxed{a} \exists y Fay$	
	5	$\boxed{b} Fab$	
	6	$\neg \forall z Fbz \rightarrow \forall y \neg Fyb$	2 \forall -elim
	7	$\neg \forall y \neg Fyb \rightarrow \forall z Fbz$	6, TC
	8	$\exists y Fyb \rightarrow \forall z Fbz$	7 QE
	9	$\exists y Fyb$	5 \exists -intro
	10	$\forall z Fbz$	8,9 TC
	11	Fbc	10 \forall -elim
	12	$\neg \forall z Fcz \rightarrow \forall y \neg Fyc$	2 \forall -elim
	13	$\neg \forall y \neg Fyc \rightarrow \forall z Fcz$	12 TC
	14	$\exists y Fyc \rightarrow \forall z Fcz$	13 QE
	15	$\exists y Fyc$	11 \exists -intro
	16	$\forall z Fcz$	14,15 TC
	17	Fcd	16 \forall -elim
	18	Fcd	4,5-17 \exists -elim
	19	Fcd	1,4-18 \exists -elim
	20	$\forall x \forall y Fxy$	3-19 \forall -intro ²