Philosophy 240: Symbolic Logic Fall 2008 Mondays, Wednesdays, Fridays: 9am - 9:50am Hamilton College Russell Marcus rmarcus1@hamilton.edu

Identity Theory Jigsaw Lesson Workgroup: At Least

I. Examine the following translations:

1. There is at least one applicant for the job.	(∃x)Ax
2. There are at least two applicants for the job.	$(\exists x)(\exists y)[Ax \bullet Ay \bullet x \neq y]$
3. There are at least three applicants for the job.	$(\exists x)(\exists y)(\exists z)[Ax \bullet Ay \bullet Az \bullet x \neq y \bullet x \neq z \bullet y \neq z]$
4. There are at least two odd prime numbers.	$(\exists x)(\exists y)(Ox \bullet Px \bullet Nx \bullet Oy \bullet Py \bullet Ny \bullet ~x=y)$
5. There is at least one mouse bigger than Rene.	$(\exists x)(Mx \bullet Bxr)$
6. There are at least two mice bigger than Rene.	$(\exists x)(\exists y)(Mx \bullet My \bullet Bxr \bullet Byr \bullet x \neq y)$

II. Try these:

- 7. There are at least three mice bigger than Rene.
- 8. There are at least four students in the course. (Sx, Cx)

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