Philosophy 240: Symbolic Logic Fall 2011 Hamilton College Russell Marcus

Identity Theory Jigsaw Lesson Work Group: At Least

I. Translation key:

b: Berkeley; c: *The Critique of Pure Reason*; d: Descartes; f: Frege Cx: x is a coherentist; Ix: x is an idealist; Mx: x is a materialist; Px: x is a philosopher Mxy: x is read more widely than y; Rxy: x respects y; Sxy: x studies y; Wxy: x wrote y

II. Examine the translations below, which use the key in I.

1. At least one materialist respects Berkeley.

 $(\exists x)(Mx \bullet Rxb)$

2. At least two materialists respect Berkeley.

 $(\exists x)(\exists y)(Mx \bullet Rxb \bullet My \bullet Ryb \bullet x \neq y)$

3. There are at least three materialists who respect Berkeley.

 $(\exists x)(\exists y)(\exists z)(Mx \bullet Rxb \bullet My \bullet Ryb \bullet Mz \bullet Rzb \bullet x \neq y \bullet x \neq z \bullet y \neq z)$

4. At least two idealist philosophers respect each other.

 $(\exists x)(\exists y)(Ix \bullet Px \bullet Iy \bullet Py \bullet x \neq y \bullet Rxy \bullet Ryx)$

5. At least three coherentists respect some book by Descartes.

 $(\exists x)(\exists y)(\exists z) \{Cx \bullet Cy \bullet Cz \bullet x \neq y \bullet x \neq z \neq y \neq z \bullet (\exists w)[(Bw \bullet Wdw) \bullet Rxw] \bullet (\exists w)[(Bw \bullet Wdw) \bullet Rzw] \}$

III. Try these, using the key in I.

6. At least two philosophers are read more widely than Frege.

7. There are at least three philosophers who are read more widely than Frege.

8. At least four idealists study The Critique of Pure Reason.