Philosophy 240: Symbolic Logic Fall 2011 Hamilton College Russell Marcus

## Identity Theory Jigsaw Lesson Work Group: Only

I. Translation key

b: Berkeley; d: Descartes; h: Hume; k: Kant; l: Locke; n: Nietzsche; s: Spinoza; Ex: x is an empiricist; Px: x is a philosopher; Rx: x is a rationalist Lxy: x likes y; Mxy: x is read more widely than y; Pxy: x plays billiards with y; Rxy: x respects y

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

1. Nietzsche respects Spinoza

Rns

2. Nietzsche respects only Spinoza

Rns •  $(\forall x)(Rnx \supset x=s)$ 

3. Only Nietzsche doesn't like Nietzsche.

 $\sim$ Lnn • ( $\forall$ x)( $\sim$ Lxn  $\supset$  x=n)

4. Only Locke plays billiards with some rationalist who is read more widely than Descartes.

 $(\exists x)(Rx \bullet Mxd \bullet Plx) \bullet (\forall x)[(Rx \bullet Mxd) \supset (\forall y)(Pyx \supset y=l)]$ 

5. Only Kant is read more widely than Descartes and Hume.

 $Mkd \bullet Mkh \bullet (\forall x)[(Mxd \lor Mxh) \supset x=k]$ 

- III. Try these, using the key in I.
  - 6. Nietzsche is the only philosopher read more widely than Descartes.
  - 7. Kant is the only empiricist who is also a rationalist.
  - 8. Only Locke and Berkeley are empiricist philosophers respected by some rationalist philosopher.