

Assignment # 5– due. Friday April 5th by 430pm

***please turn your assignment in to the Carleton University philosophy department (3rd floor Patterson Hall) with **your name on it, and the name of your TA.** ***

*** Your TA is the individual leading your tutorial. The table below lists which TA is assigned to each tutorial timeslot***

TA Name	Timeslot	Room	email
Adham El Shazly	Mon, 835am-925am	Southam 402	adhamelshazly@cmail.carleton.ca
Jonathan Life	Tues, 1135am-1235pm	Tory Bldg 208	jonathanlife@cmail.carleton.ca
Eddie Cai	Fri. 935am-1035am	Southam 516	eddiecai@cmail.carleton.ca
Peter Ferri	Fri. 1135am-1235pm	Tory Bldg 202	peterferri@cmail.carleton.ca

Using the predicates and constants provided, translate the following English sentences into predicate logic

- Ax- x is an athlete
 Px- x plays professional sports
 Tx- x is tall
 Wx- x works hard
 Dx- x has determination

1. If all athletes play professional sports, then some athletes work hard and have determination.

$$[(\forall x) (Ax \supset Px)] \supset \{(\exists x)[Ax \bullet (Wx \bullet Dx)]\}$$

2. Only athletes who are tall and work hard play professional sports.

$$(\forall x)\{Px \supset [Ax \bullet (Tx \bullet Wx)]\}$$

3. All athletes who play professional sports and have determination are neither tall nor work hard.

$$(\forall x)\{[(Ax \bullet Px) \bullet Dx] \supset \sim(Tx \vee Wx)\}$$

Rx- x is rationalist
 Sx- x is a skeptic
 Tx- x is a theist
 Ix- x is an idealist
 Ax- x is an apriorist
 Ex- x is an empiricist
 Cx- c is consistent

b- Berkeley
 h- Hume

4. Some rationalists who are skeptics are not theists.

$$(\exists x)[(Rx \bullet Sx) \bullet \sim Tx]$$

5. All idealists are apriorists, but not theists.

$$(\forall x)[Ix \supset (Ax \bullet \sim Tx)]$$

6. Berkeley is an empiricist and Hume is not an apriorist.

$$Eb \bullet \sim Ah$$

7. If some idealists are not skeptics then not all theists are rationalists.

$$(\exists x)(Ix \bullet \sim Sx) \supset \sim(\forall x)(Tx \supset Rx)$$

8. No apriorist rationalists are skeptics, but Hume is.

$$(\forall x)[(Ax \bullet Rx) \supset \sim Sx] \bullet Sh$$

9. Only consistent rationalists are apriorists.

$$(\forall x)[(Rx \bullet Ax) \supset Cx]$$

10. Everyone is a theist unless someone is a skeptic and not an apriorist.

$$(\forall x)(Px \supset Tx) \vee (\exists x)(Sx \bullet \sim Ax)$$

11. Some apriorist is a skeptic if, and only if, s/he is an inconsistent empiricist.

$$(\exists x)[(Ax \bullet Sx) \equiv (Ex \bullet \sim Cx)]$$