

Logic Worksheet 4

Your name:	Mark (out of 5):
Logic class (A–F):	
Logic class tutor:	

Read §§17–24 of forall λ :Cambridge, then complete the following exercises. Some exercises are marked with a ‘*’; techniques to answer these will be covered in the lecture on the day before the worksheet is due.

Self-marked exercises

Do the following practice exercises from forall λ :Cambridge.

- §18 Part B
- §19
- §21 Part A questions 2, 4, 6, 8, 9, 10

When you have completed these, carefully check your answers against the answers available at www.nottub.com/forallx.shtml. Correct your own work *in red*, for the marker to review. In the box below, write something that you now firmly understand, as a result of doing these exercises:

Understand:

And in this box, write something that you want to know more about:

Want more about:

Further exercises

A. Using the following symbolisation key:

domain: animals and stairs

Cx : $____x$ has clogs on

Mx : $____x$ is a mouse

Sx : $____x$ is a stair

Oxy : $____x$ is on $____y$

Symbolise the following English sentences in FOL as best you can. Be warned that they are deliberately fiddly:

1. A mouse is on a stair
2. The mouse is on a stair
3. A mouse is on the stair
4. The mouse is on the stair
5. The mouse with clogs on is on the stair
6. The mouse on the stair has clogs on

Explain why you must give different answers to 5 and 6.

B. * Do §23 Part D questions 2, 4, 6, 7, 9