

# Logic Worksheet 4

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

## Reading

§§17–24 of forall $\chi$ :Cambridge.

## Self-marked exercises

Do the following practice exercises from forall $\chi$ :Cambridge.

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

Exercises marked with a ‘★’ will be covered in the lecture on the day before the worksheet is due. When you have completed them, carefully check your answers against the answers available at <http://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 to know more about:

How you fill out these boxes will help to guide your logic class.

## 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