

**Mathematics-Computing & Information Systems 4215H – Mathematical logic**  
TRENT UNIVERSITY, Fall 2012

**Problem Sets**

All references are to *A Problem Course in Mathematical Logic*, Version 1.6. Do the following problems and prove the following results.

1. *Due on Friday, 21 September, 2012.*  
1.1 (parts 2, 4, 6), 1.2, 1.5, 1.7, 1.10, 1.11 (part 2)      *Bonus: 1.12*
2. *Due on Friday, 28 September, 2012.*  
2.1 (parts 2, 4), 2.2, 2.3, 2.4 (part 2), 2.6, 2.10
3. *Due on Friday, 5 October, 2012.*  
3.1 (for axiom schema A3 only), 3.4, 3.5, 3.7, 3.9 (1) & (3)      *Bonus: 3.9 (2)*
4. *Due on Friday, 12 October, 2012.*  
4.1, 4.2, 4.4, 4.5, 4.6, 4.9
5. *Due on Friday, 19 October, 2012.*  
4.11, 4.12, 4.13, 5.1 (parts 2, 4, 6, 8), 5.4 (parts 2, 4, 6, 8)
6. *Due on Friday, 2 November, 2012.*  
5.2 & 5.6 (for the same choice of language), 5.8 & 5.12 (parts 2, 4), 5.9 (parts 1, 2),  
5.11, 5.13, 5.14
7. *Due on Friday, 9 November, 2012.*  
6.1 (part 2), 6.2, 6.4 (part 2), 6.5, 6.6 (part 2), 6.7, 6.8
8. *Due on Friday, 16 November, 2012.*  
6.10, 6.12, 6.14, 6.15 (parts 1, 2)
9. *Due on Friday, 23 November, 2012.*  
6.17, 7.1 (parts 1, 2), 7.3 (parts 2, 4), 7.5 (parts 4, 5), 7.11  
*Bonus: 7.5 (part 3)*
10. *Due on Friday, 30 November, 2012.*  
7.13 (part 2), 8.1, 8.2, 8.6, 8.11, 8.13
11. *Due on Wednesday, 5 December, 2012.*  
8.14, 8.15, 8.16