

CISC 404/604 homework 3.

You do not have to write the superscripts of predicate symbols.

1. (10 points) Exercise 2.21, parts (a) through (e), page 64.
2. (10 points) Exercise 2.23, page 65.
3. (10 points) Exercise 2.32, page 76.
4. (25 points) Exercise 2.33, page 77.

For Exercises 2.32 and 2.33, you may use any of the inference rules (MP, UG), derived inference rules (UI, EG), and the TF rule (equivalent to the derived rules on pages 74-75), but identify which rule you are using at each step. You may also use the deduction theorem.