Category Theory	**Lars Birkedal**
Fall 2000	**Thomas Hildebrandt**

Assignment 4

Suggested Exercises from Course Notes: 62,63,64,68,69

Exercises to hand-in from Course Notes: 66

Extra Exercises to hand-in:

1. Consider definition 4.7 in the Course Notes. Suppose the regular category is the category **Sets** of sets and functions. Explain for each item in the definition ((i)–(v)) what the interpretation amounts to concretely. Just choose some suitable interpretations for basic terms and basic function and symbols so that the exercise non-trivial (i.e., dont interpret all function symbols by the same function, for example).

   In item (ii), suppose that $t = f(x)$ and $s = g(y)$ are two terms built up from function symbols f and g and variables x and y of different sorts X and Y.

   In item (iii), suppose R is a binary relation symbol, and let t and s be the terms from above.

   It items (iv) and (iv), just assume some suitable interpretations exist for φ and ψ.