CSI 519 — Fall 2013: Homework 5

Due: Oct 31 before 1:00 pm

Answer all questions on your own. If you are using more than one sheet of paper, make sure that you staple all the sheets together.

Scanned copies of handwritten answers will not be graded.

Remember that collaboration of any kind is not allowed.

1. Use PT (extended) given in class to check whether the following expression is type correct.

   \[ \text{fn } (x) \Rightarrow ((x \ y) \ y) 3) \]

   Explain all steps clearly.

2. Use PT (extended) given in class to check whether the following expression is type correct.

   \[ \text{let val f = g(g(x)) in g end} \]

   Explain all steps clearly.

3. Use PT (extended) given in class to check whether the following expression is type correct.

   \[ \text{let fun f(x) = y in f(f(5)) end} \]