Homework set 10: λ-calculus — due Wednesday 7 March

Total number of points available on this homework is 100. Full credit is equivalent to 100 points.

1. (30 pts.) (Turing) Let $A \triangleq \lambda xy.y(xxy)$. Let $\Theta \triangleq AA$. Show that Θ is a fixed-point operator.

2. (70 pts.) (Klop) Let:

   $$\text{\pounds} = \lambda abcdefghijklmnopqstuvwxyzr.\, r(thisisafixedpointcombinator)$$
   $$\$ = \text{\pounds}$$

   Show that $ is a fixed-point combinator.