

$(\backslash m. (\backslash n. (\backslash f. (m (n f)))))$
 $(\backslash f. (\backslash x. f(f x)))$
 $(\backslash f. (\backslash x. f(f(f x))))$

= substitute for m and n

$\backslash f. ((\backslash f. (\backslash x. f(f x))) ((\backslash f. (\backslash x. f(f(f x)))) f))$

= substitute for the third $\backslash f$, delete superfluous parentheses

$\backslash f. ((\backslash f. (\backslash x. f(f x))) (((\backslash x. f(f(f x)))))$

$\backslash f. (\backslash f. (\backslash x. f(f x))) (\backslash x. f(f(f x)))$

= substitute for the second $\backslash f$

$\backslash f. (((\backslash x. (\backslash x. f(f(f x))) ((\backslash x. f(f(f x))) x))))$

$\backslash f. (\backslash x. (\backslash x. f(f(f x))) ((\backslash x. f(f(f x))) x))$

= substitute for the third $\backslash x$

$\backslash f. (\backslash x. (\backslash x. f(f(f x))) ((f(f(f x)))))$

$\backslash f. (\backslash x. (\backslash x. f(f(f x))) (f(f(f x))))$

= substitute for the second $\backslash x$

$\backslash f. (\backslash x. (f(f(f(f(f x))))))$

$\backslash f. \backslash x. f(f(f(f(f x))))$