

```
(\m. (\n. (\f. (\x. (m (n f)) x))))
(\f. (\x. f(f x)))
(\f. (\x. f(f(f x))))
```

= substitute for m and n

```
\f. (\x. ((\f. (\x. f(f x))) ((\f. (\x. f(f(f x)))) f)) x)
```

= substitute for the third \f, delete superfluous parentheses

```
\f. (\x. ((\f. (\x. f(f x))) ((\x. f(f(f x))))) x)
```

```
\f. (\x. ((\f. (\x. f(f x))) (\x. f(f(f x)))) x)
```

= substitute for the second \f

```
\f. (\x. (((\x. (\x. f(f(f x))) ((\x. f(f(f x))) x))) x)
```

```
\f. (\x. (\x. (\x. f(f(f x))) ((\x. f(f(f x))) x)) x)
```

= substitute for the second \x

```
\f. (\x. ((\x. f(f(f x))) ((\x. f(f(f x))) x)))
```

= substitute for the third \x

```
\f. (\x. ((\x. f(f(f x))) ((f(f(f x))))))
```

```
\f. (\x. ((\x. f(f(f x))) (f(f(f x)))))
```

= substitute for the second \x

```
\f. (\x. ((f(f(f(f(f x)))))))
```

```
\f. \x. f(f(f(f(f x))))
```