hw-3

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First Task

Exercise.

$$((\lambda a.(\lambda b.b\ b)\ (\lambda b.b\ b))\ b)\ ((\lambda c.c\ b)\ (\lambda a.a)) \tag{1}$$

Solution.

$$((\lambda a.(\lambda b.b\ b)\ (\lambda b.b\ b))\ b)\ ((\lambda c.c\ b)\ (\lambda a.a)) \underset{\beta}{\to} ((\lambda b.b\ b)\ (\lambda b.b\ b))\ ((\lambda c.c\ b)\ (\lambda a.a))$$
$$= \Omega\ ((\lambda c.c\ b)\ (\lambda a.a))$$

Eqation (1) *hasn't normal form*