# Class Activity Solutions

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|---|---|
| (λf.λx.f(f x))(λz.x+z)2 = | |
| (λf.λa.f(f a))(λz.x+z)2 -> | (rename x) |
| ([(λz.x+z)/f]λa.f(f a))2 = | (reduce f) |
| (λa.(λz.x+z)((λz.x+z)a))2 = | (substitution) |
| (λa.(λb.x+b)((λz.x+z)a))2 -> | (rename z) |
| (λa.(λb.x+b)([a/z](x+z))2 = | (reduce z) |
| (λa.(λb.x+b)(x+a))2 -> | (substitution) |
| (λa.[(x+a)/b](x+b))2 = | (reduce b) |
| (λa.x+(x+a))2 -> | (substitution) |
| [2/a](x+(x+a))= | (reduce a) |
| x+x+2 | (substitution) |