

# Disc 10 - Lambda Calculus and Rust Basics

Wednesday, November 10, 2021 11:00 AM

## Lambda Calculus

Completely reduce the following if possible, or write "Not Possible"

1)  $x (\lambda x. x x) (\lambda y. y y)$

2)  $(\lambda x. x x) (\lambda y. y y)$

3)  $(\lambda a. b) x$

Show that the following hold through lambda encodings

Given:

$\text{not} = \lambda x. (x \text{ false}) \text{ true}$

$\text{true} = \lambda x. \lambda y. x$

$\text{false} = \lambda x. \lambda y. y$

1)  $\text{not} (\text{not true}) = \text{true}$