

## 0.1 Beta and Eta Equivalence

### 0.1.1 Beta-Eta conversions

### 0.1.2 Equivalence Relation

### 0.1.3 Congruences

## 0.2 Beta-Eta Equivalence Implies Both Sides Have the Same Type

### 0.2.1 Equivalence Relations

Case Symmetric

Case Transitive

### 0.2.2 Beta conversions

Case Lambda

Case Associativity

Case Eta

Case If-True

### 0.2.3 Congruences

Case Lambda

Case Return

Case Apply

Case Bind

Case If

Case Subtype

Case subeffect

## 0.3 Beta-Eta equivalent terms have equal denotations

### 0.3.1 Equivalence Relation

Case Reflexive

Case Symmetric

Case Transitive

### 0.3.2 Beta Conversions

Case Lambda

Case Left Unit

Case Right Unit

Case Associative

Case Eta

Case If-True

Case If-False

### 0.3.3 Case If-Eta

### 0.3.4 Congruences

Case Lambda

Case Return

Case Apply

Case Bind

Case If

Case Subtype

**Case subeffect**