Computability - Assignment 3

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1.

The function declared in this exercise performs equality check on two natural numbers i.e. it is a function that returns `True()` if both arguments are equal and `False()` otherwise.

2.

`t` :

```
C(λz.z)
```

Abstract syntax of `t` :

```
const
  C
  (cons
    (lambda z (var z))
    nil
  )
```

Concrete syntax standard representation of `t` :

```
Const(
  Zero(),
  Cons(
    Lambda(
      Suc(Zero()),
      Var(Suc(Zero()))
    ),
    Nil()
  )
)
```

Abstract syntax standard representation of `t` :

```
const
  Const
  (cons
    (const Zero() nil)
    (cons
      (const
        Cons
        (cons
          (const
            Lambda
            (cons
              (const
                Suc
```

```
                  (cons (const Zero nil) nil)
                )
                (cons
                  (const
                    Var
                    (cons
                      (const
                        Suc
                        (cons (const Zero nil) nil)
                      )
                      nil
                    )
                  )
                  nil
                )
              )
            )
            (cons
              (const Nil nil)
              nil
            )
          )
        )
        nil
      )
    )
```