PPL-Assignment 3

**Question 1:**

1. **Correct**, because G receives T1 and returns T2 which is the correct input for F and after its activation will output T3 as needed.
2. **Incorrect**, the input for F is one argument T1 and in the expression the input for F is two expressions.
3. **Correct**, when we try to applied x:T1 to both sides of the argument we get a valid equation. Furthermore, the substitution doesn’t make the right side more specific.
4. **Correct**, when we try to applied T1:T2 to both sides of the argument we get a valid equation. Furthermore, the substitution doesn’t make the right side more specific.

**Question 2:**

**2.1**

a. never

b. string

c. any

d. number

e. never

f. Boolean

**2.2**

**[a]**- is? boolean

**[b]**- is? boolean

**[c]**- (isBoolean z)

**2.3**

The return type of F is **(union number boolean string ).**

The type of X is (**union number boolean**). If X is a number the output of F will be the string "positive" or "negative". Else, X is Boolean and the output of F will be X himself which is (union number boolean). The program will never return 1 because X is Boolean or number and in those cases the code won't return 1 at any activation. That because it is given that the type of x is union (number boolean).