Consider the two programs below, written in Python:

```
f = lambda w: w(1)
g = lambda x: x + 2
h = lambda y: y > 3
i = lambda z: z * z
x = f(g) if f(h) else f(i)
```

Figure 1: Program written in Python with lambda expressions.

1. What is the value that is produced in variable `x` by the program on the left?
2. What is the control-flow graph of this program? See if you can draw a draft of this CFG on a piece of paper.

```
a = lambda f: lambda x: f(f((x)))
b = lambda y: y * y
c = lambda z: z + 3
d = a(b)
e = a(c)
x = d(3) + e(4)
```

Figure 2: Another program written in Python with lambda expressions.

3. What is the value that is produced in variable `x` by this new python program on the left?
4. What is the control-flow graph of this program?

5. In general, can you think about a way to find the control-flow graph of these programs that manipulate high-order functions (functions that receive other functions as arguments, or that return other functions?)

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