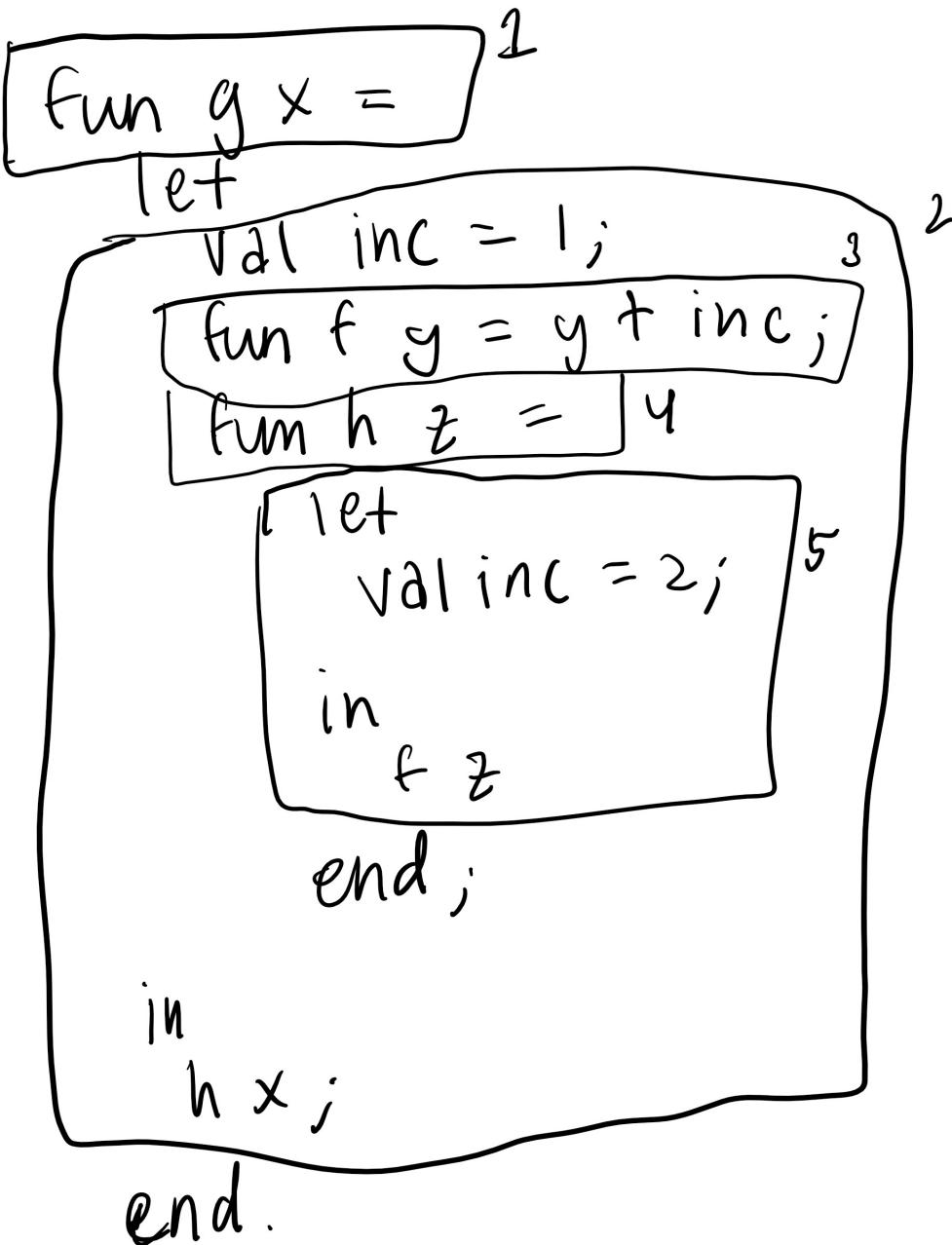


3 a) Draw a circle around every block, and number the blocks.



there's a total of 5 blocks

b) Identify each definition of 2 name .

- Val inc = 1 and Val inc = 2

c) For each definition, describe its scope in terms of your block numbers

- val inc = 1 scope is within block 2
- val inc = 2 scope is within block 5

d) A block is any language construct that contains definitions and also contains the region of the program where those definitions apply. (From lecture slides)

In our case, since inc is defined $\text{Val inc} = 1$, then $\text{fun } y = y + \text{inc}$, the use of inc will use the variable it is defined to.

Q a) For each occurrence of the name `Renew` that is a definition, describe what binding for `Renew` is established.

```
class Renew {  
    Renew Renew (Renew Renew) {  
        Renew:  
            for (jj) {  
                if (Renew.Renew (Renew) == Renew)  
                    break Renew;  
            }  
            return Renew;  
    }  
}
```

class Reuse : is the definition of the class

Reuse Reuse : function name of type Reuse that
also returns Reuse.

Reuse (above the for loop): defines what the for loop will return.

b) For each occurrence of Reuse that is not a definition, show which definition is used to bind it.

```
class Reuse {  
    Reuse Reuse(Reuse reuse) {  
        Reuse :  
            for (;;) {  
                if (Reuse.Rause(kause) == Reuse)  
                    break Reuse;  
            }  
            return Reuse;  
    }  
}
```

Reuse Reuse (parameter) : defines a variable to the type
Reuse.

Reuse. reuse(Reuse) == Reuse : calls the function Reuse
return Reuse : returns the variable being passed in.