1.

a. fun3(10,4)

x=10, y=4

x>y

⇒ return -1 #

b. fun3(4,3)

x=4, y=3

x>y

⇒ return -1 #

c. fun3(4,7)

x=4, y=7

x<y

⇒ return (4* fun3(5,7))

fun3(5,7)

x=5, y=7

x<y

⇒ return (5 * fun3(6,7))

fun3(6,7)

x=6, y=7

x<y

⇒ return (6*fun3(7,7))

fun3(7,7)

x=7, y=7

x=y

⇒ return 1

⇒ return 6*1

⇒ return 5*6*1

⇒ return 4*5*6*1 = 120 #

d. fun3(0,0)

x=0, y=0

x=y

⇒ return 1 #

2.

```
Algorithm  Ackerman(m,n)
    if (m = 0)
        return (n+1)
    else if (n = 0  and  m > 0)
        return  Ackerman(m-1,1)
    else
        return  Ackerman( m-1, Ackerman(m,n-1))
```

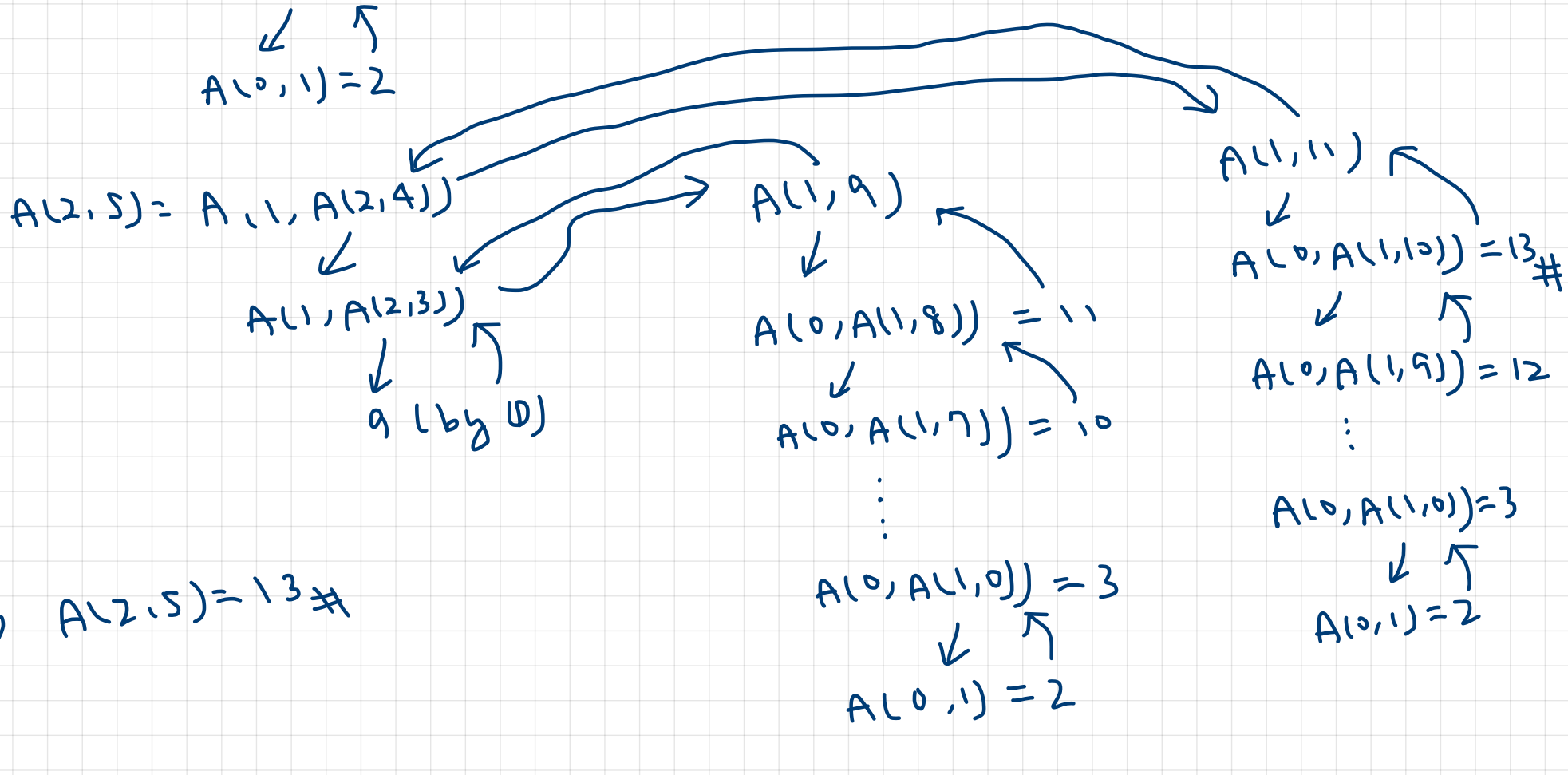
end if

end Ackerman

(1)

⇒ A(2,3) = 9 #

(2)

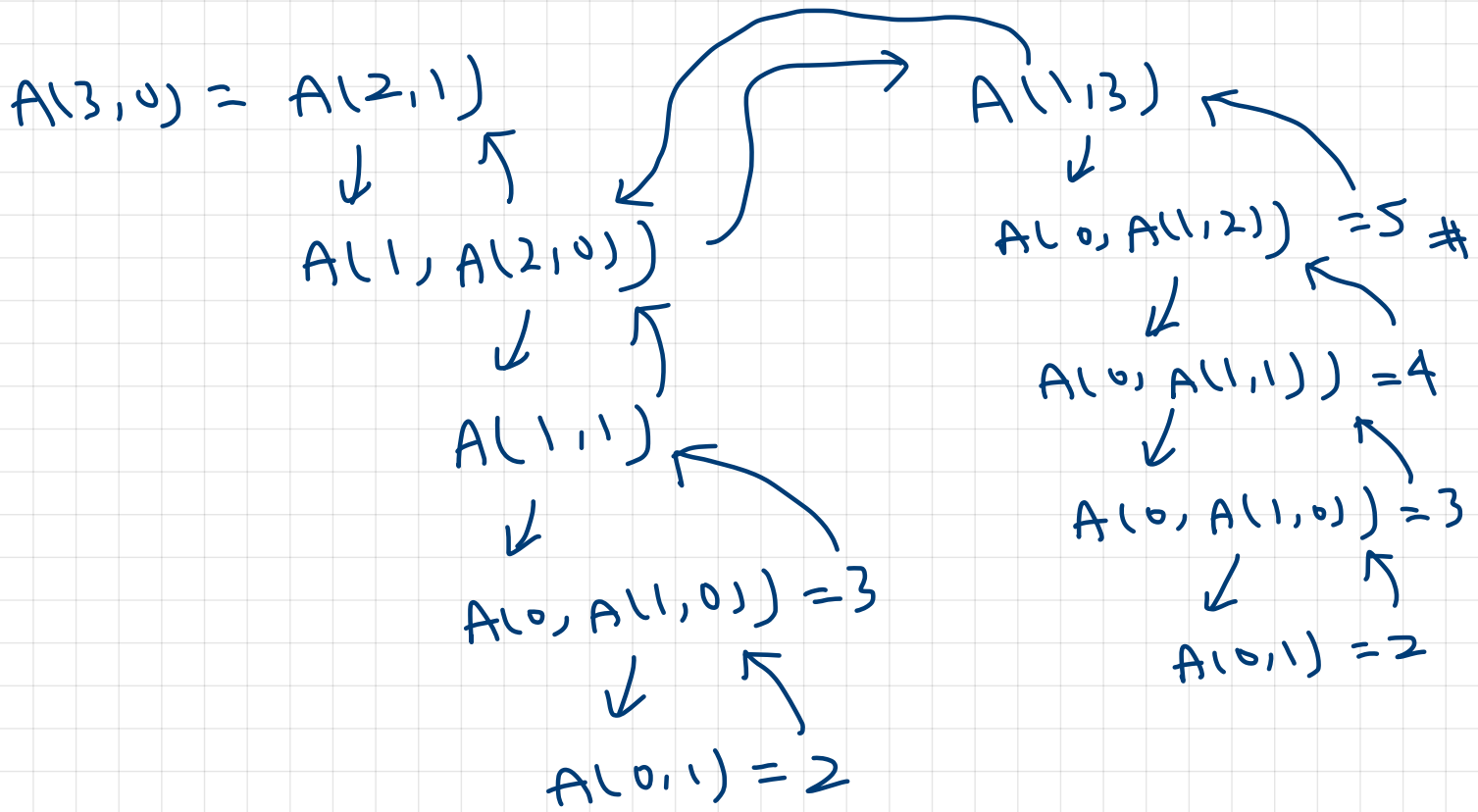


⇒ A(2,5) = 13 #

③

$A(0,3) = 4$ #

④



$\Rightarrow A(3,0) = 5$ #