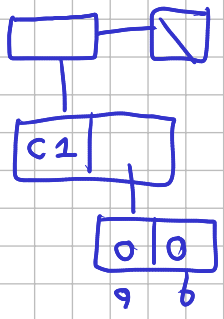
```
class c1 extends object
        field a
        field b
        method initialize () 0
        method setup (k, l)
                begin
                set a=+(k,3);
                set b=l;
                8
                end
        method m1 (n) send self m2 (+(a,n))
        method m2 (n) *(n, -(a,b))
        method m4 (x, y) send self m1 (-(x,y))

class c2 extends c1
        field b
        field c
        method setup (k, l)
                begin
                set b=k;
                set c=-(k, l);
                super setup(+(b,k), -(1,l));
                send self m3(k)
                end
        method m2 (n) super m2(+(n, c))
        method m3 (n) send self m1(*(n,2))
        method m4 (n, m) +(m, super m4(n, m))

class c3 extends c2
        method m2 (n) super m2(n)
        method m4 (n,m) *(+(n,m),b)

let p=proc (o, r, q)
        let r1 = send o setup(r, q)
          in let r2 = send o m4(q, r)
                r3 = send o m1(r)
                in +(r1, +(r2,r3 ))
    o1 = new c1()
    o2 = new c2()
    o3 = new c3()
    in let x= (p o1 5 2)
        y= (p o2 4 1)
        z= (p o3 3 0)
        in send o2 m4(x, +(y,z))
```

8+30+78 = 116

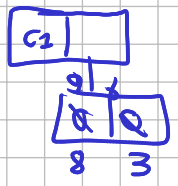
1) Dibuja los obj o1, o2, o3

2) Haz la ambiente

o1)

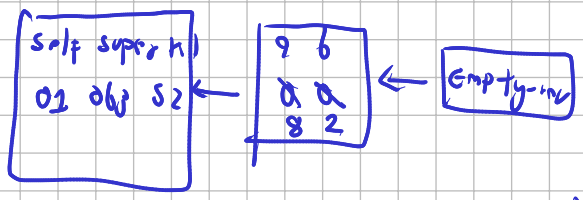


Simple



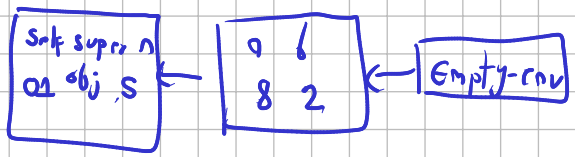
Plong

Send o1 setup (5,2)

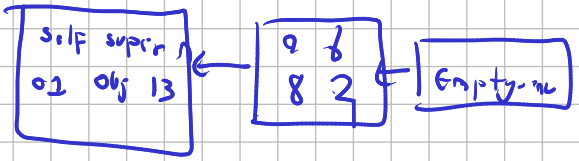


v1 = 8

Send o1 m1(5)

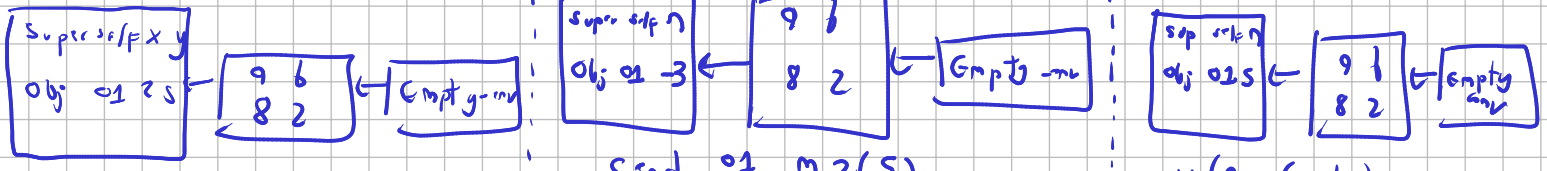


Send o1 m2(13)



*(n, -(a, b))
*(13, -6) = 78

Send o1 m4(2, 5)

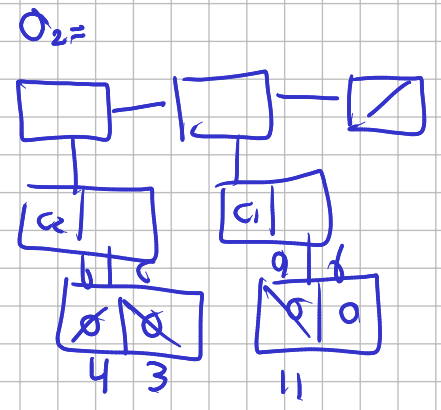


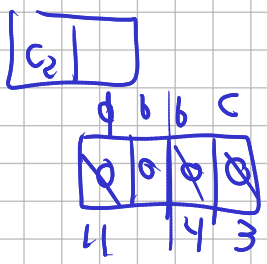
Send o1 m1(-3)

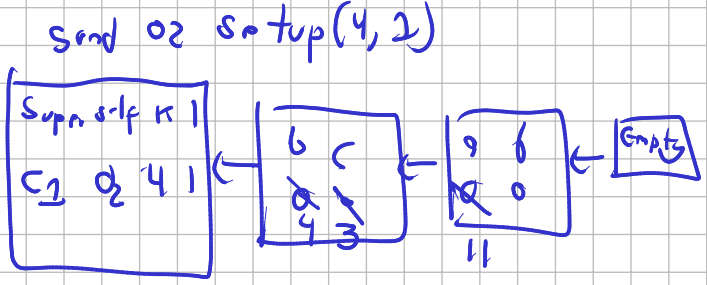
Send o1 m2(5)

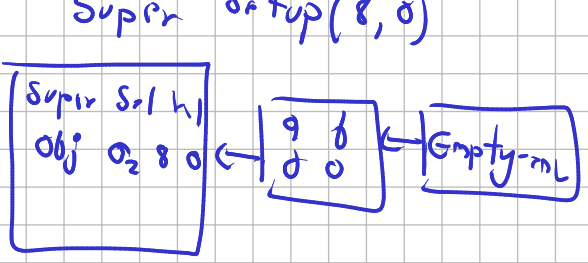
*(n, -(x, b))
*(5, 6) = 30

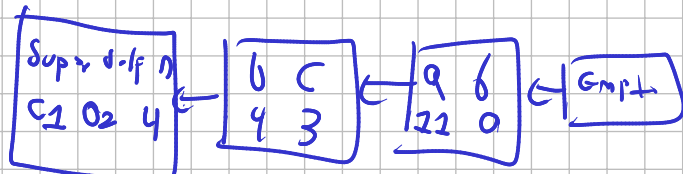
```
class c1 extends object
        field a
        field b
        method initialize () 0
        method setup (k, l)
                begin
                set a=+(k,3);
                set b=l;
                8
                end
        method m1 (n) send self m2 (+(a,n))
        method m2 (n) *(n, -(a,b))
        method m4 (x, y) send self m1 (-(x,y))

class c2 extends c1
        field b
        field c
        method setup (k, l)
                begin
                set b=k;
                set c=-(k, l);
                super setup(+(b,k), -(1,l));
                send self m3(k)
                end
        method m2 (n) super m2(+(n, c))
        method m3 (n) send self m1(*(n,2))
        method m4 (n, m) +(m, super m4(n, m))

class c3 extends c2
        method m2 (n) super m2(n)
        method m4 (n,m) *(+(n,m),b)

let p=proc (o, r, q)
            let r1 = send o setup(r, q)
              in let r2 = send o m4(q, r)
                    r3 = send o m1(r)
                    in +(r1, +(r2,r3 ))
    o1 = new c1()
    o2 = new c2()
    o3 = new c3()
    in let x= (p o1 5 2)
           y= (p o2 4 1)
           z= (p o3 3 0)
           in send o2 m4(x, +(y,z))
```

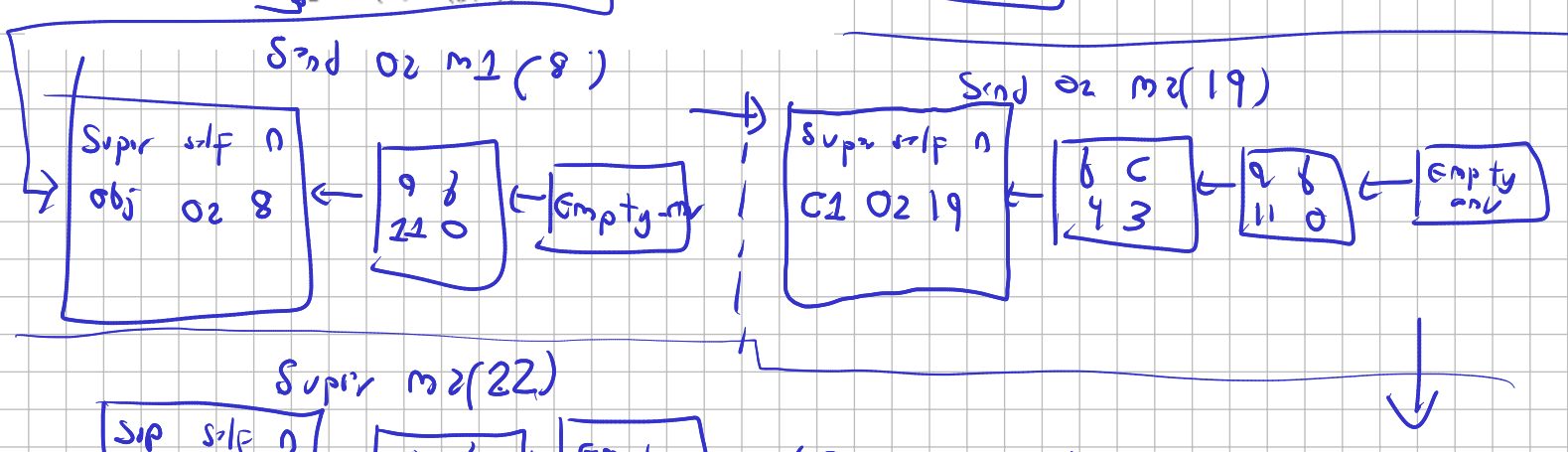




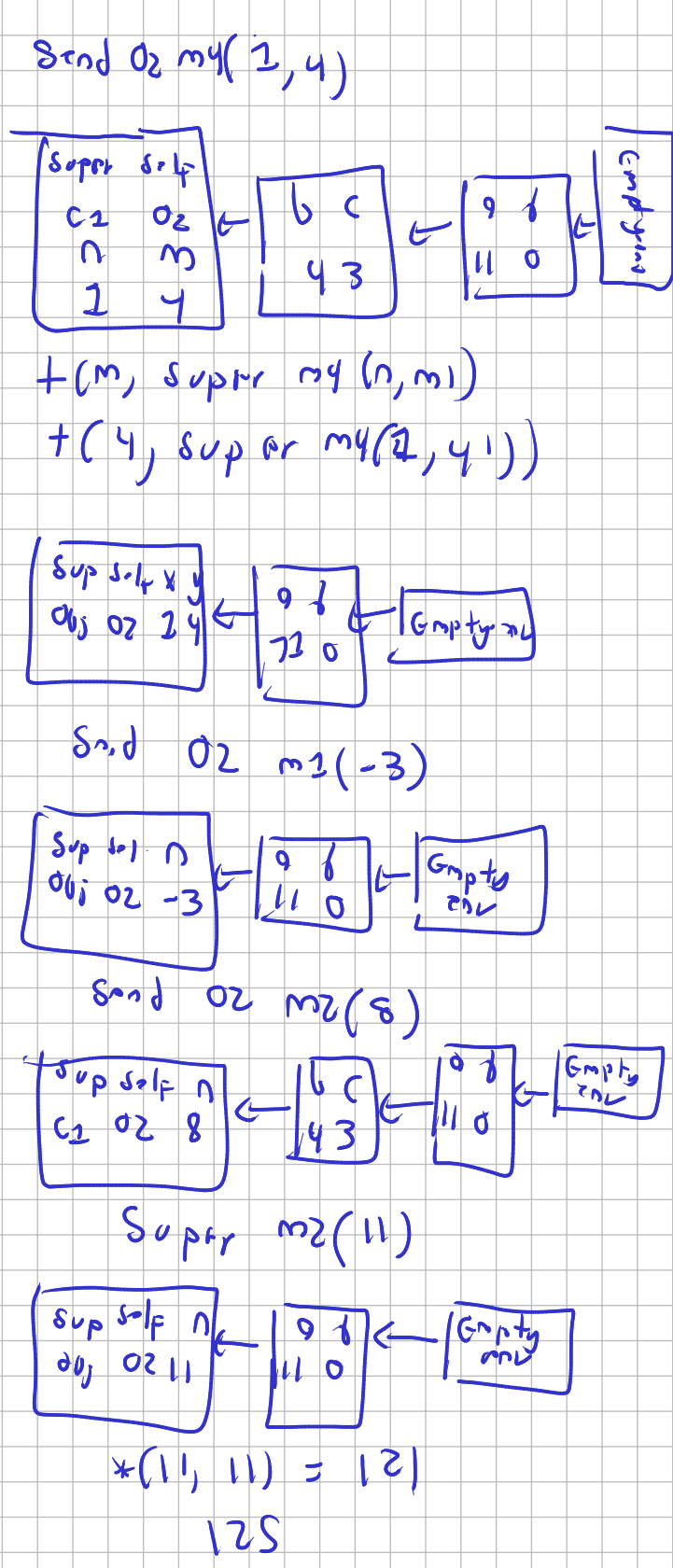






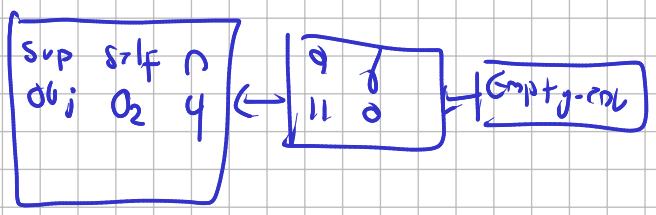


```
class c1 extends object
        field a
        field b
        method initialize () 0
        method setup (k, l)
                begin
                set a=+(k,3);
                set b=l;
                8
                end
        method m1 (n) send self m2 (+(a,n))
        method m2 (n) *(n, -(a,b))
        method m4 (x, y) send self m1 (-(x,y))

class c2 extends c1
        field b
        field c
        method setup (k, l)
                begin
                set b=k;
                set c=-(k, l);
                super setup(+(b,k), -(1,l));
                send self m3(k)
                end
        method m2 (n) super m2(+(n, c))
        method m3 (n) send self m1(*(n,2))
        method m4 (n, m) +(m, super m4(n, m))

class c3 extends c2
        method m2 (n) super m2(n)
        method m4 (n,m) *(+(n,m),b)

let p=proc (o, r, q)
            let r1 = send o setup(r, q)
                in let r2 = send o m4(q, r)
                       r3 = send o m1(r)
                       in +(r1, +(r2,r3 ))
    o1 = new c1()
    o2 = new c2()
    o3 = new c3()
    in let x= (p o1 5 2)
           y= (p o2 4 1)
           z= (p o3 3 0)
           in send o2 m4(x, +(y,z))
```

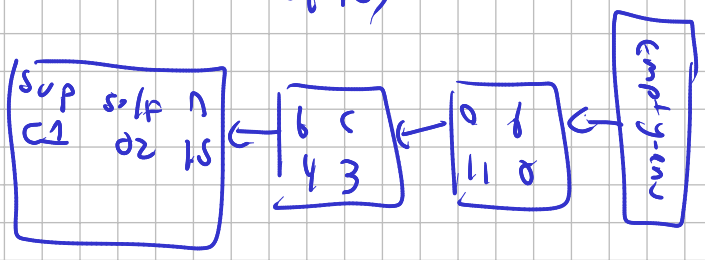


```
class c1 extends object
        field a
        field b
        method initialize () 0
        method setup (k, l)
                begin
                set a=+(k,3);
                set b=l;
                8
                end
        method m1 (n) send self m2 (+(a,n))
        method m2 (n) *(n, -(a,b))
        method m4 (x, y) send self m1 (-(x,y))

class c2 extends c1
        field b
        field c
        method setup (k, l)
                begin
                set b=k;
                set c=-(k, l);
                super setup(+(b,k), -(1,l));
                send self m3(k)
                end
        method m2 (n) super m2(+(n, c))
        method m3 (n) send self m1(*(n,2))
        method m4 (n, m) +(m, super m4(n, m))

class c3 extends c2
        method m2 (n) super m2(n)
        method m4 (n,m) *(+(n,m),b)

let p=proc (o, r, q)
            let r1 = send o setup(r, q)
               in let r2 = send o m4(q, r)
                      r3 = send o m1(r)
                      in +(r1, +(r2,r3 ))
   o1 = new c1()
   o2 = new c2()
   o3 = new c3()
   in let x= (p o1 5 2)
          y= (p o2 4 1)
          z= (p o3 3 0)
          in send o2 m4(x, +(y,z))
```

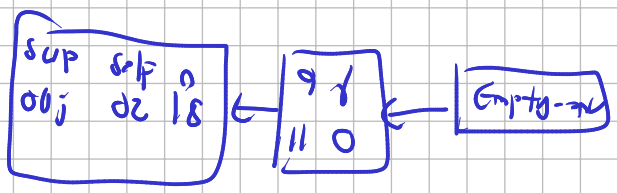
Send o2 m1(4)



Send o2 m2(18)



Super m2(18)

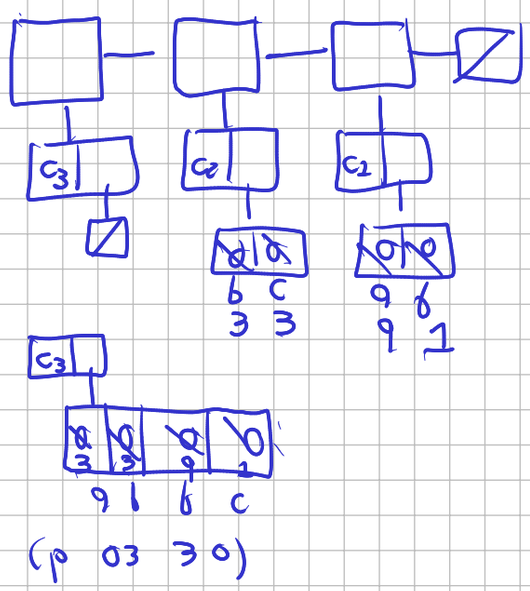


*(18, 11) = 198

```
class c1 extends object
        field a
        field b
        method initialize () 0
        method setup (k, l)
                begin
                set a=+(k,3);
                set b=l;
                8
                end
        method m1 (n) send self m2 (+(a,n))
        method m2 (n) *(n, -(a,b))
        method m4 (x, y) send self m1 (-(x,y))

class c2 extends c1
        field b
        field c
        method setup (k, l)
                begin
                set b=k;
                set c=-(k, l);
                super setup(+(b,k), -(1,l));
                send self m3(k)
                end
        method m2 (n) super m2(+(n, c))
        method m3 (n) send self m1(*(n,2))
        method m4 (n, m) +(m, super m4(n, m))

class c3 extends c2
        method m2 (n) super m2(n)
        method m4 (n,m) *(+(n,m),b)

let p=proc (o, r, q)
            let r1 = send o setup(r, q).
                in let r2 = send o m4(q, r)
                       r3 = send o m1(r)
                       in +(r1, +(r2,r3 ))
    o1 = new c1()
    o2 = new c2()
    o3 = new c3()
    in let x= (p o1 5 2)
           y= (p o2 4 1)
           z= (p o3 3 0)
           in send o2 m4(x, +(y,z))
```

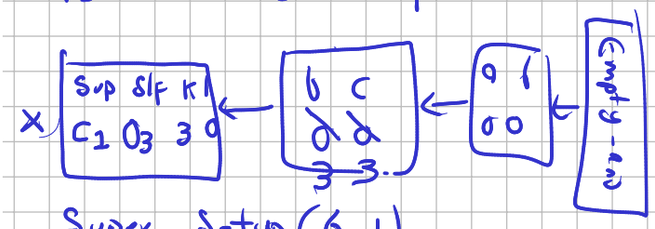
144

o3 = new c3()

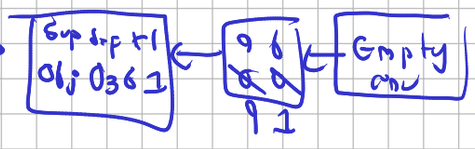


(p o3 3 0)

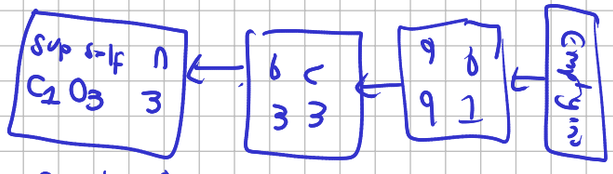
r1 = send o3 setup(3,0)



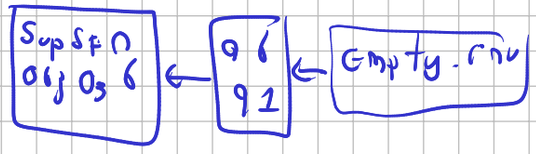
super setup(6, 1)



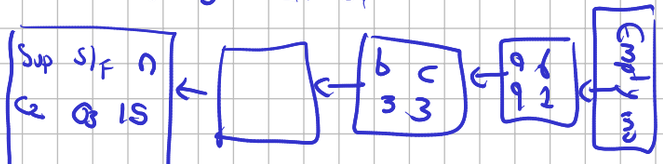
send slf m3(3)



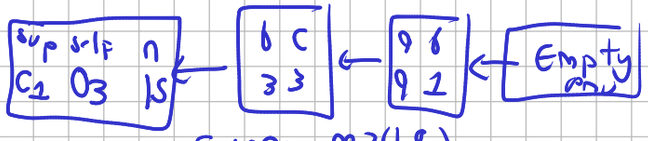
send o3 m2(6)



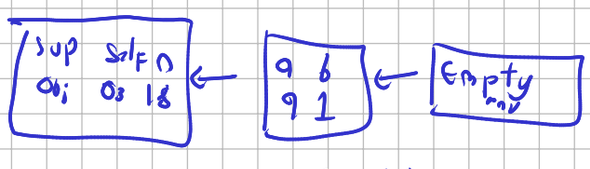
send o3 m2(15)



super m2(15)



super m2(18)



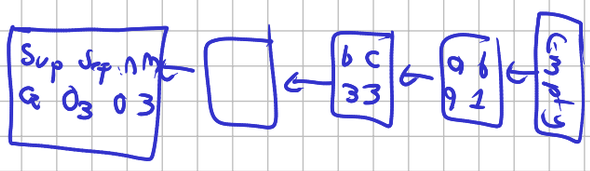
x (n, -(9,6))

(18, 8)

144

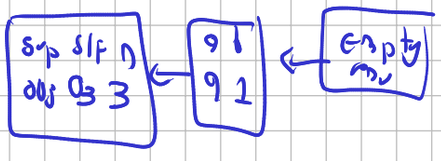
```
class c1 extends object
        field a
        field b
        method initialize () 0
        method setup (k, l)
                begin
                set a=+(k,3);
                set b=l;
                8
                end
        method m1 (n) send self m2 (+(a,n))
        method m2 (n) *(n, -(a,b))
        method m4 (x, y) send self m1 (-(x,y))

class c2 extends c1
        field b
        field c
        method setup (k, l)
                begin
                set b=k;
                set c=-(k, l);
                super setup(+(b,k), -(1,l));
                send self m3(k)
                end
        method m2 (n) super m2(+(n, c))
        method m3 (n) send self m1(*(n,2))
        method m4 (n, m) +(m, super m4(n, m))

class c3 extends c2
        method m2 (n) super m2(n)
        method m4 (n,m) *(+(n,m),b)

let p=proc (o, r, q)
            let r1 = send o setup(r, q)
               in let r2 = send o m4(q, r)
                  r3 = send o m1(r)
                  in +(r1, +(r2,r3 ))
   o1 = new c1()
   o2 = new c2()
   o3 = new c3()
   in let x= (p o1 5 2)
          y= (p o2 4 1)
          z= (p o3 3 0)
          in send o2 m4(x, +(y,z))
```

b c a b
3 3 9 1

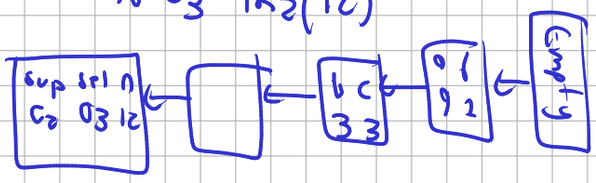


*(+(n,m),b))
3, 3 = 9

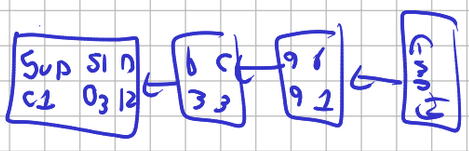
Snd o3 m1(3)



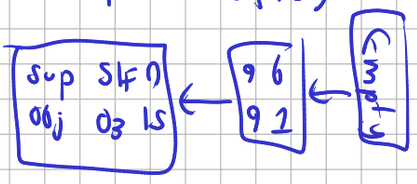
Snd o3 m2(12)



Super m2(12)



Super m2(15)



*(n, -(a, b))
15, 8 = 120

```
class c1 extends object
        field a
        field b
        method initialize () 0
        method setup (k, l)
                begin
                set a=+(k,3);
                set b=l;
                8
                end
        method m1 (n) send self m2 (+(a,n))
        method m2 (n) *(n, -(a,b))
        method m4 (x, y) send self m1 (-(x,y))

class c2 extends c1
        field b
        field c
        method setup (k, l)
                begin
                set b=k;
                set c=-(k, l);
                super setup(+(b,k), -(1,l));
                send self m3(k)
                end
        method m2 (n) super m2(+(n, c))
        method m3 (n) send self m1(*(n,2))
        method m4 (n, m) +(m, super m4(n, m))

class c3 extends c2
        method m2 (n) super m2(n)
        method m4 (n,m) *(+(n,m),b)

let p=proc (o, r, q)
                let r1 = send o setup(r, q)
                    in let r2 = send o m4(q, r)
                           r3 = send o m1(r)
                           in +(r1, +(r2,r3 ))
    o1 = new c1()
    o2 = new c2()
    o3 = new c3()
    in let x= (p o1 5 2)
           y= (p o2 4 1)
           z= (p o3 3 0)
       ->in send o2 m4(x, +(y,z))
```