FUNZIONI VARIADICHE

```
func sum1(x ...int) int {
    s := 0
    for _, v := range x {
        s += v
    }
    return s
}

func sum2(x []int) int {
    s := 0
    for _, v := range x {
        s += v
    }
    return s
}
```

```
    }
    return s
}
```

```
x := sum1(5, 7, 9)
y := sum1(3, 2, 1, 1, 1, 1, 5)
z := sum1([]int{3, 7, 2})   NO
```

```
x := sum2(5, 7, 9)   NO
y := sum2([]int{3, 7, 2})
```

```
var s []int
s = []int{3, 5, 7, 9, 1, 1, 1}
```

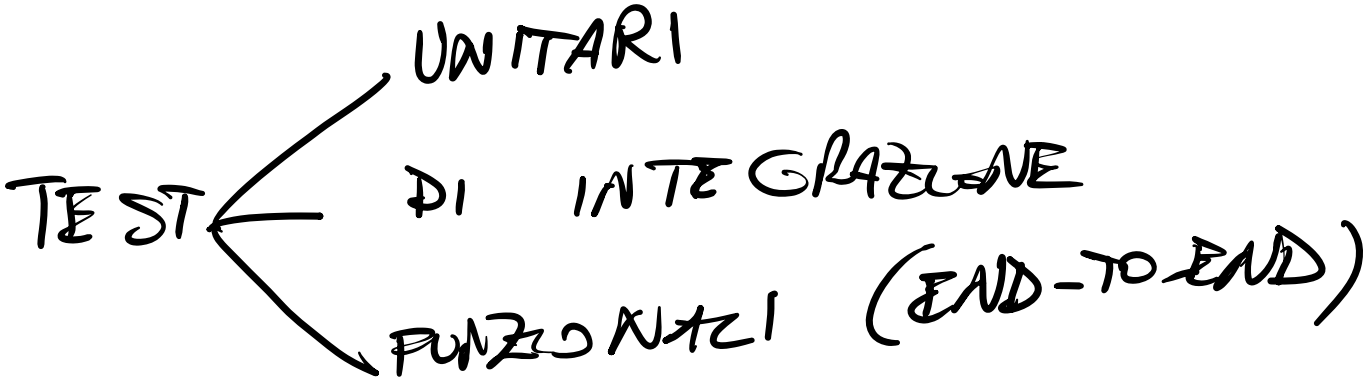
```
x := ~~sum1(5)~~
y := sum1(s...)
```

Uso su append

```
var s,t []string
s = append(s, "ciao")
s = append(s, "x", "y", "z")
t = append(t, "pippo", "pluto")
t = append(t, "topolino")
s = append(s, t...)
```

```
y = append(x[:i], x[i+1:]...)
```

TESTING



TIPI FUNZIONE

```
func Pippo (x int, y float64) bool
```

↓ ha tipo

```
func (int, float64) bool
```

↑ ha tipo

```
func approxime(a int, y float64) bool

var f func(int, float64) bool

if ..... {
    f = Pippo
} else {
    f = approxiable
```

}

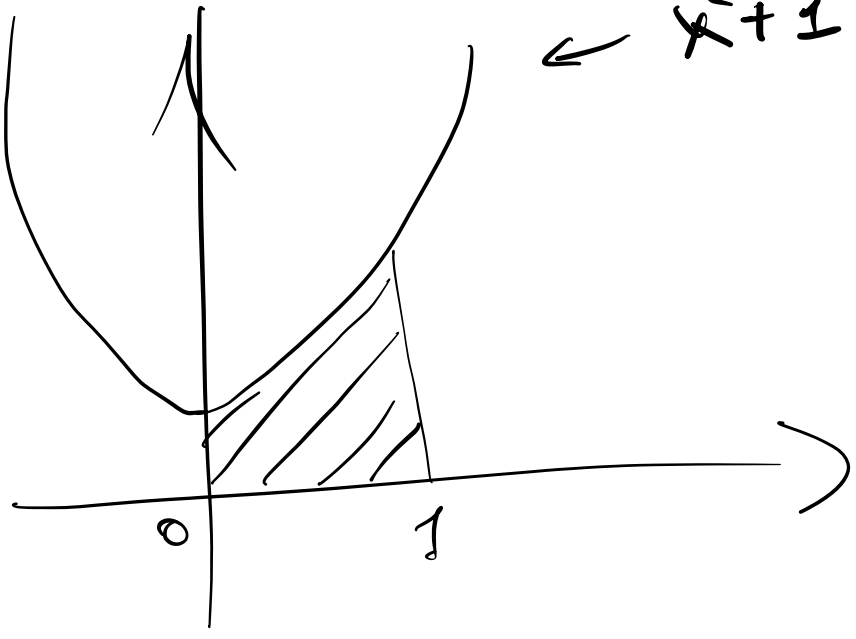
f(3, 2.5)

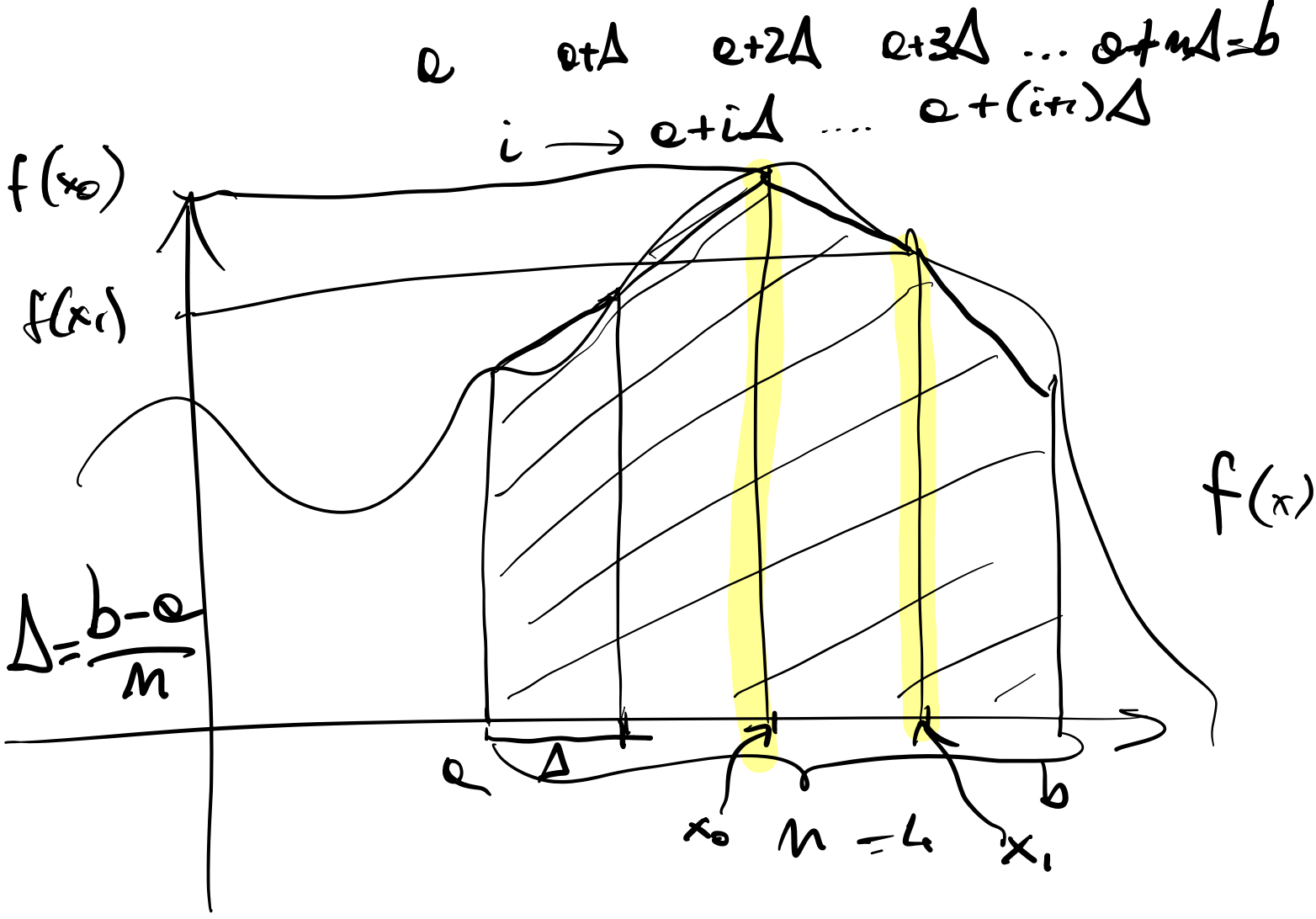
ESEMPIO: INTEGRAZIONE NUMERICA

$$\int_0^1 (x^2+1)\,dx = \left[\frac{x^3}{3}+x\right]_0^1 =$$

$$= \left(\frac{1^3}{3}+1\right) - \left(\frac{0^3}{3}+0\right) =$$

$$= \frac{4}{3}$$






```
func integra(f func(float64)float64,
             a,b float64,
             n int) float64 {

    Delta := (b-a) / float64(n)

    S := 0.0

    for i:=0; i<n; i++ {
        x0 = a + float64(i) * Delta
        x1 = a + float64(i+1) * Delta
```

```
    y0 = f(x0) ←
    y1 = f(x1) ←
    area := (y0 + y1) * DeHa/2
    s += area
}
return s
}
```

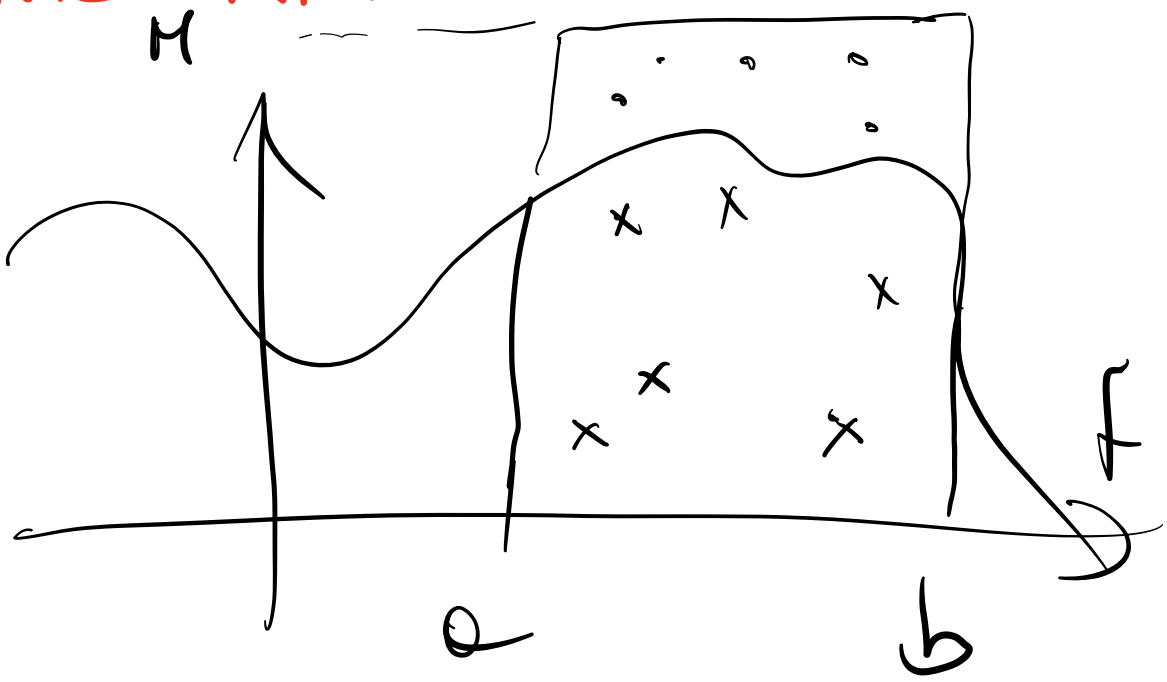
$$\int_0^1 (x^2+1)\,dx$$

```
func parab(x float64) float64 {
    return x*x+1
}

integra(parab, 0, 1, 64)
integra(math.Sin, 4, 9, 100)
```

$$\int_4^9 \sin(x)\,dx$$

INTEGRAZIONE MONTE-CARLO



$$\frac{\text{croci}}{\text{palloncini}} \cdot M(b-a)$$