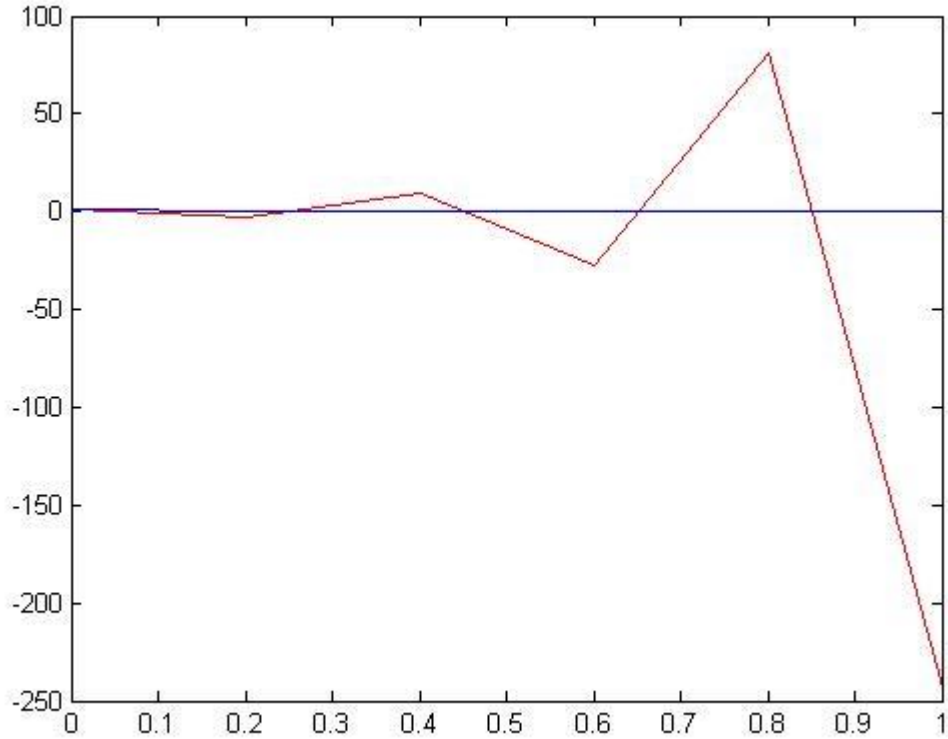


# Risultati Laboratorio 9

## Esercizio 9.1

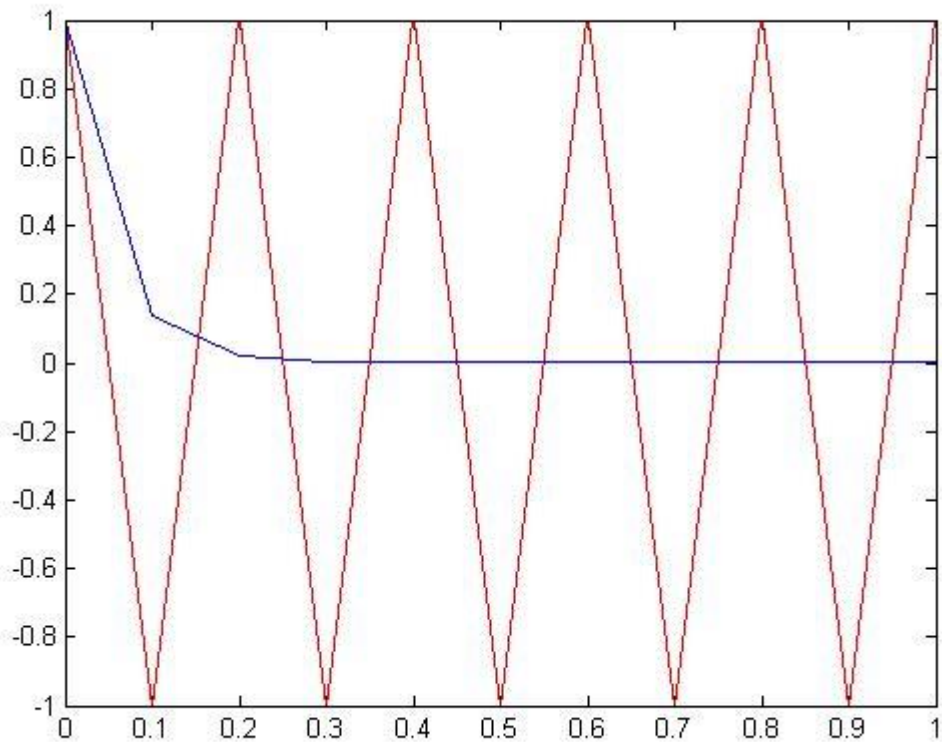
Eulero Esplicito con  $N=5$

$$\tau = 1/5 > 2/20 \quad R(\tau\lambda) = -3$$



Eulero Esplicito con  $N=10$ .

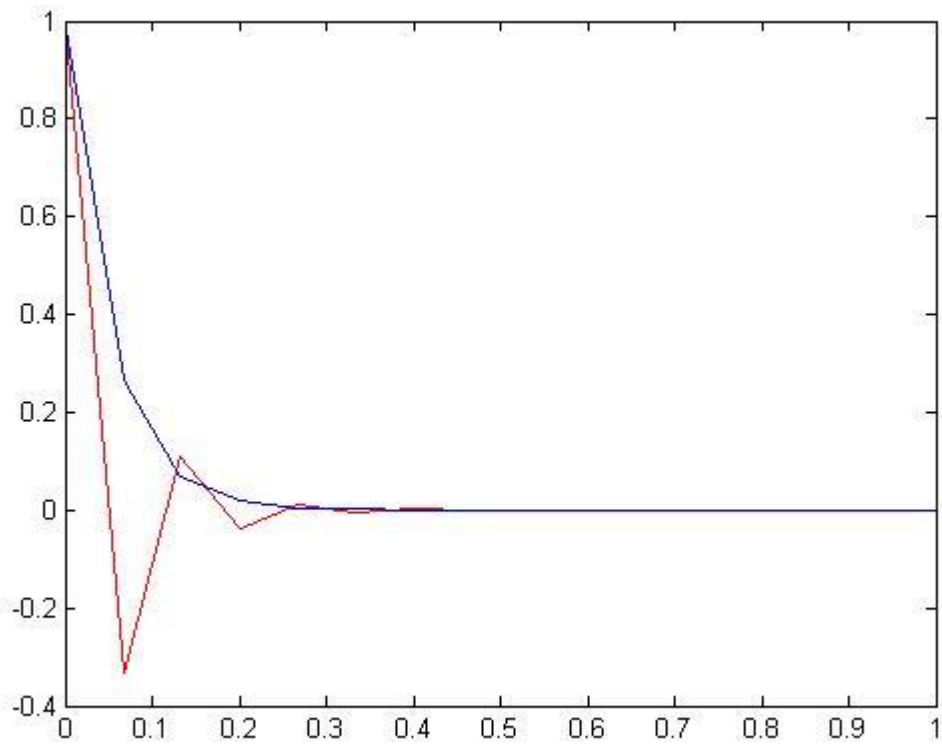
$$\tau = 1/10 = 2/20 \quad R(\tau\lambda) = -1$$



**Eulero Esplicito con  $N=15$**

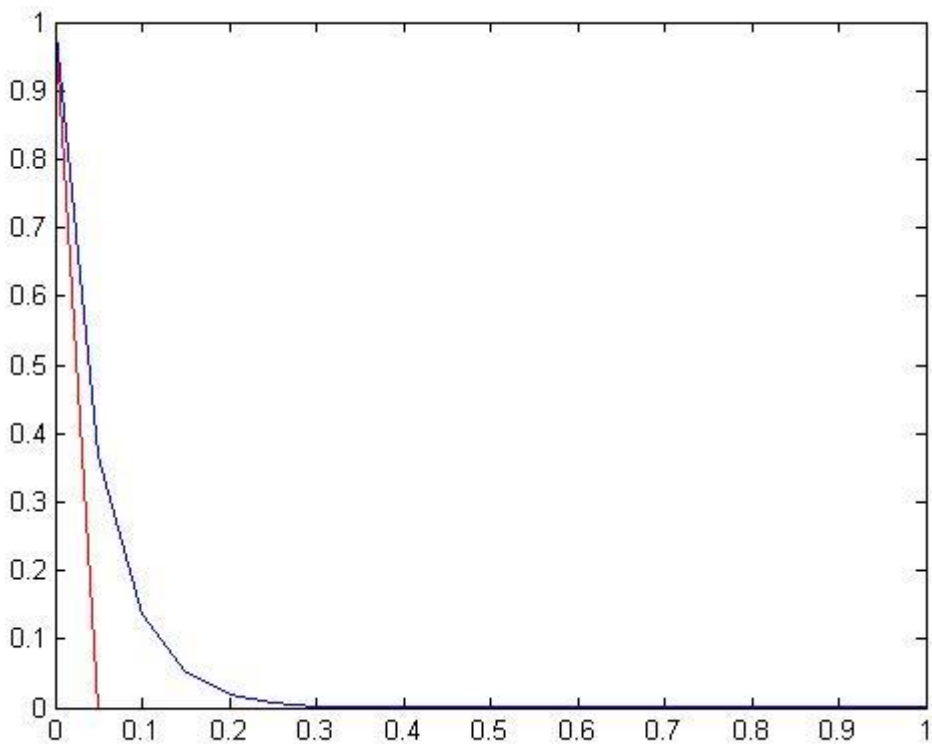
$$1/20 < \tau = 1/15 < 2/20$$

$$R(\tau\lambda) = -1/3$$



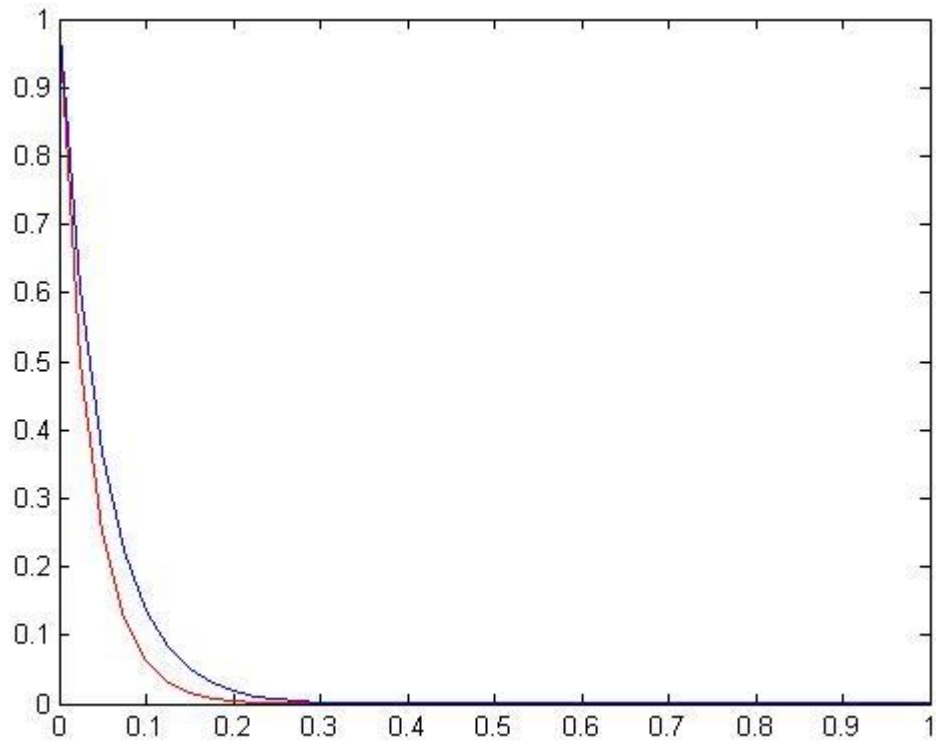
**Eulero Esplicito con  $N=20$**

$$\tau = 1/20 \text{ caso degenerare: } U_n = 0 \text{ per } n > 0 \quad R(\tau\lambda) = 0$$

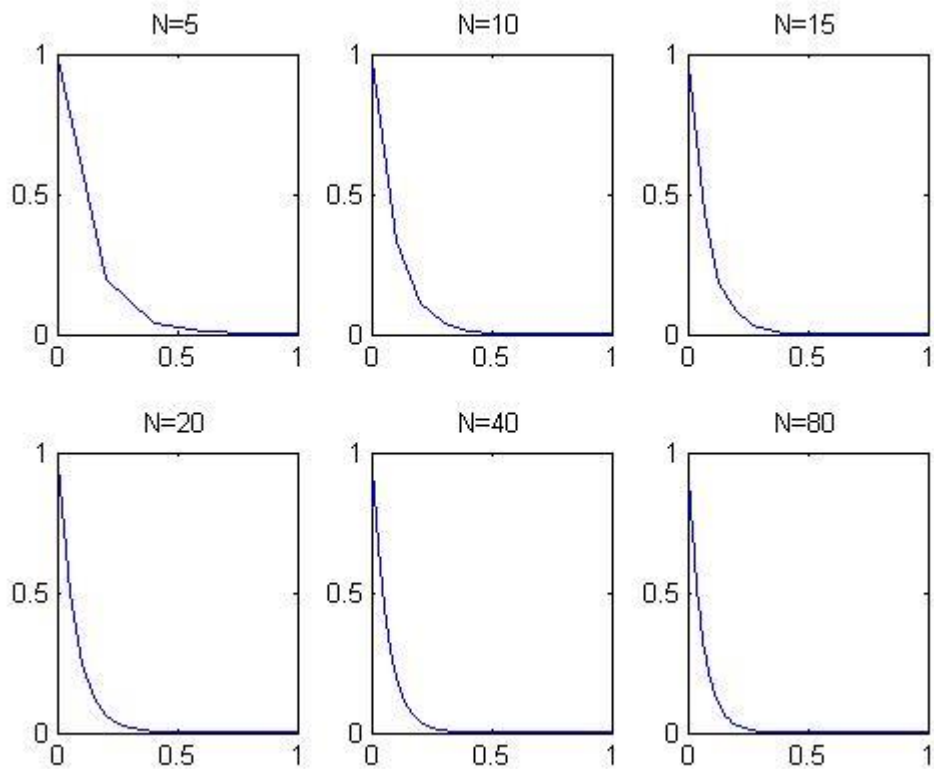


**Eulero Esplicito con N= 40.**

$$\tau = 1/40 < 1/20 \quad R(\tau\lambda) = 1/2$$



## Eulero Implicito



## Esercizio 9.2

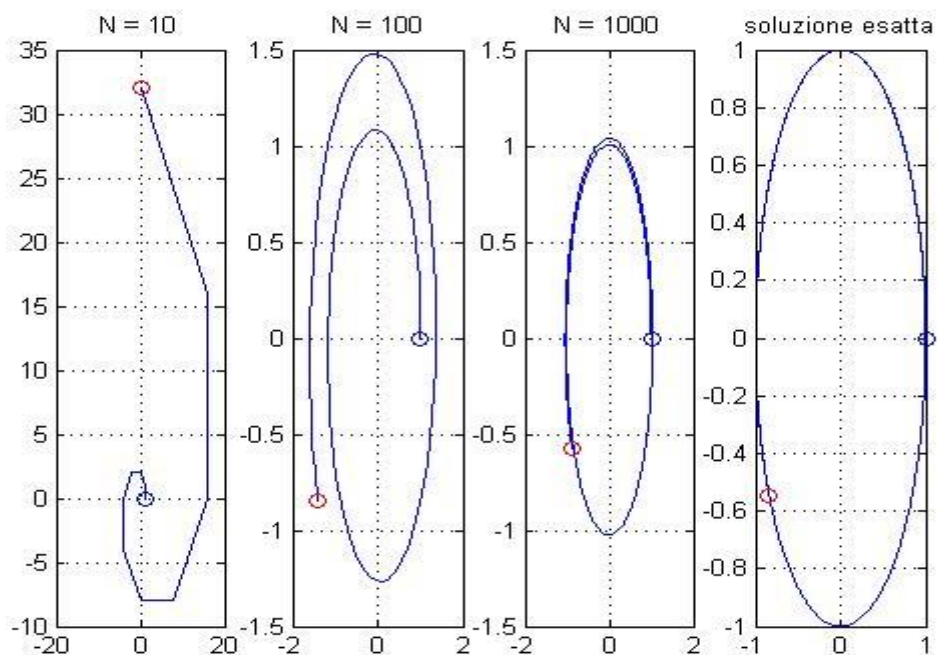
$$u' = \lambda u, \quad 0 \leq t \leq T,$$

$$u(0) = 1$$

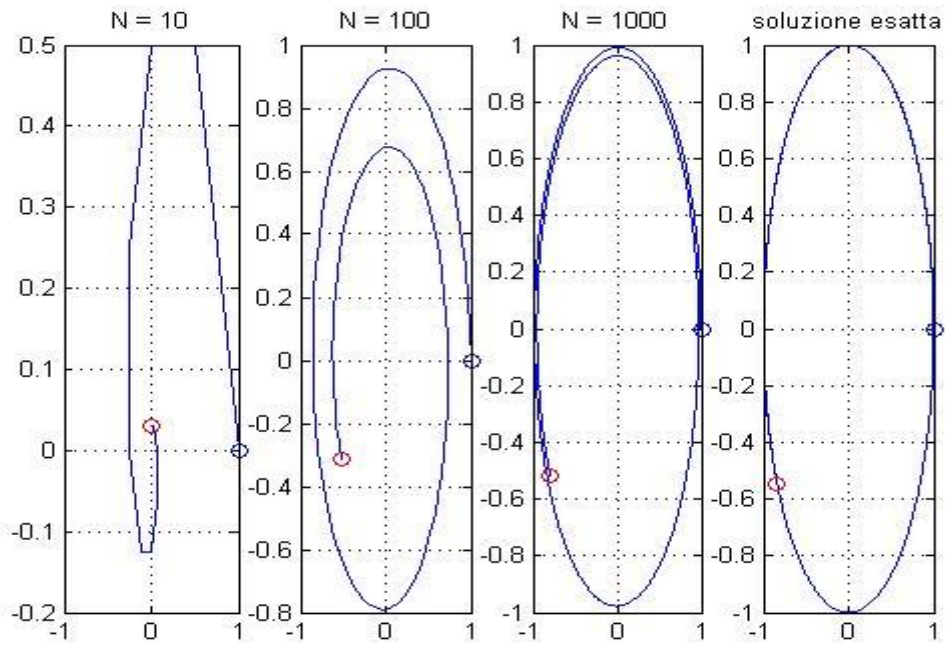
$$\lambda = i$$

$$T = 10$$

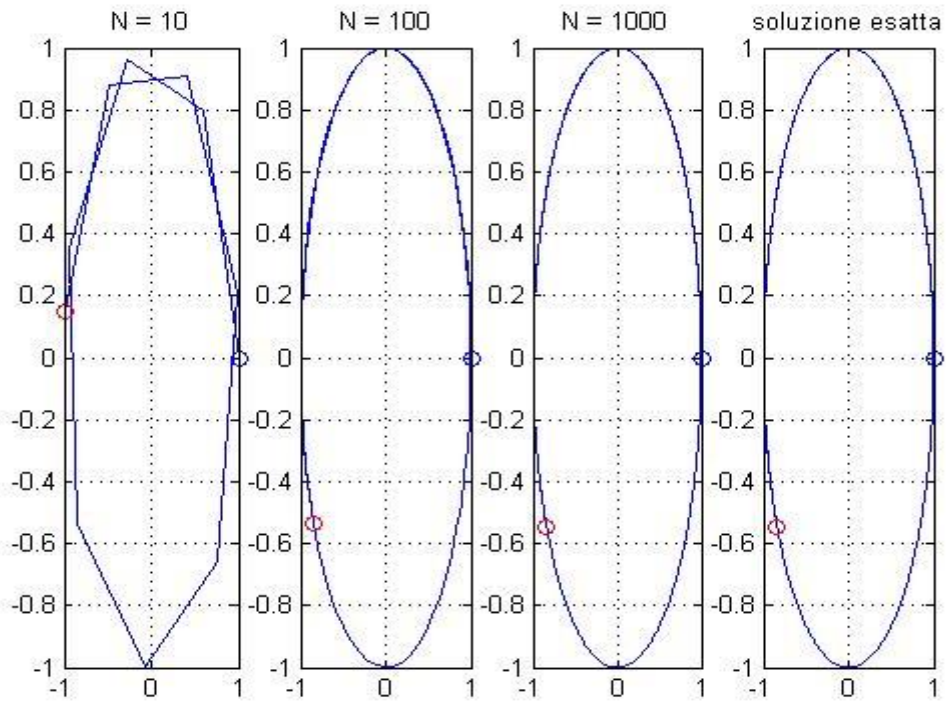
## Eulero Esplicito



## Eulero Implicito



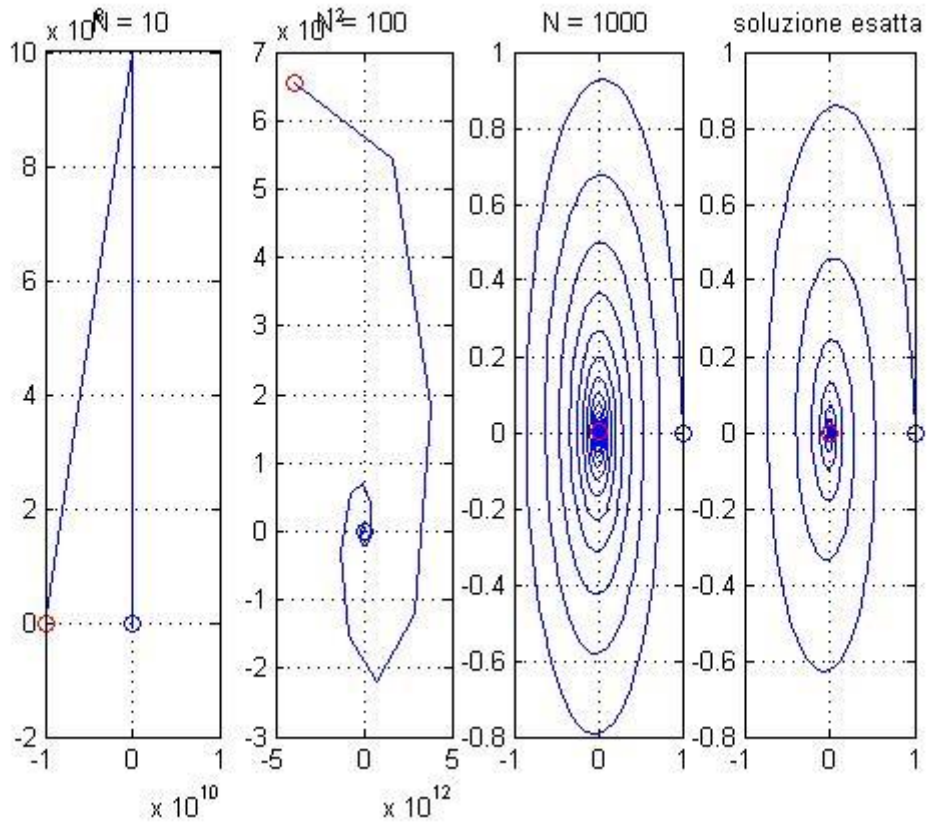
## Trapezi - Punto Medio Implicito



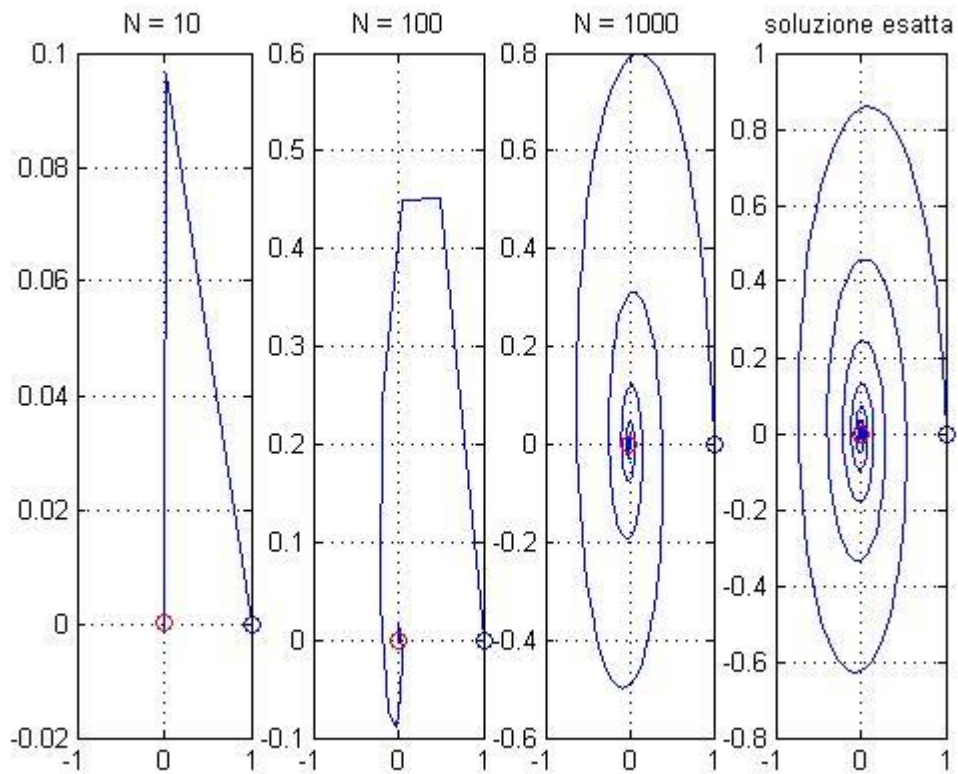
$$\lambda = -1+10i$$

$$T = 10$$

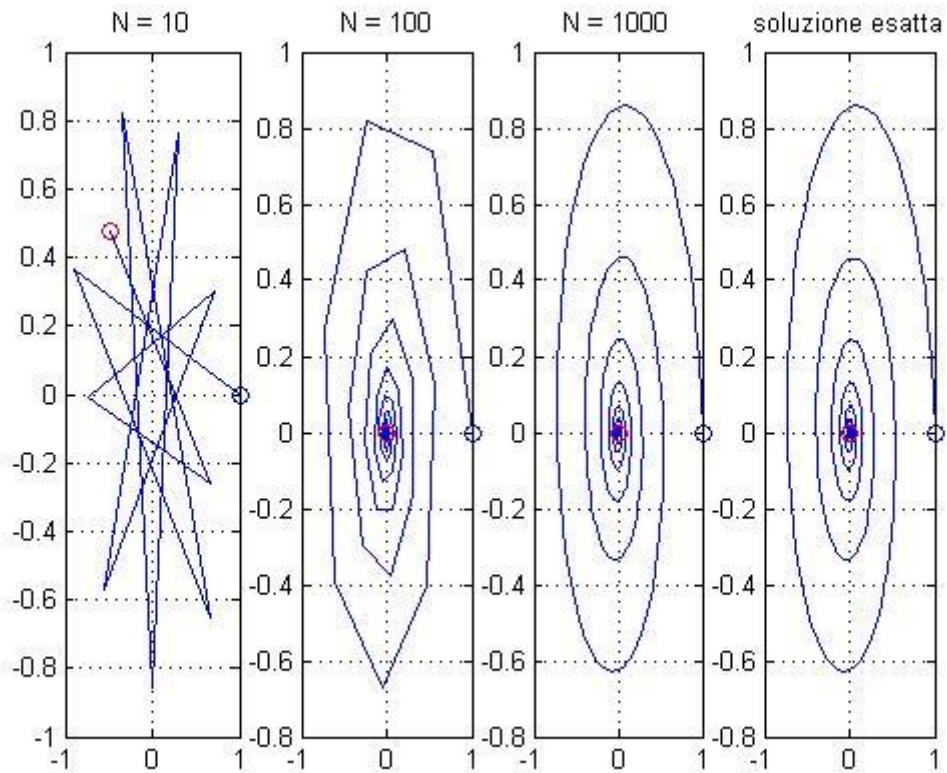
### Eulero Esplicito



### Eulero Implicito



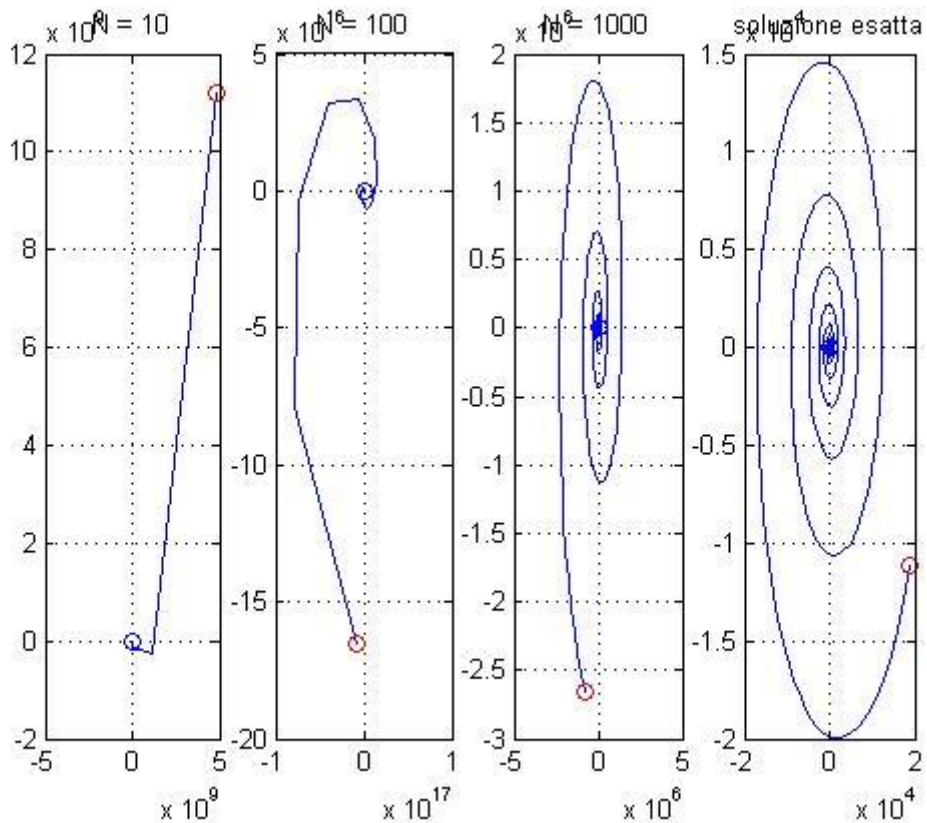
## Trapezi - Punto Medio Implicito



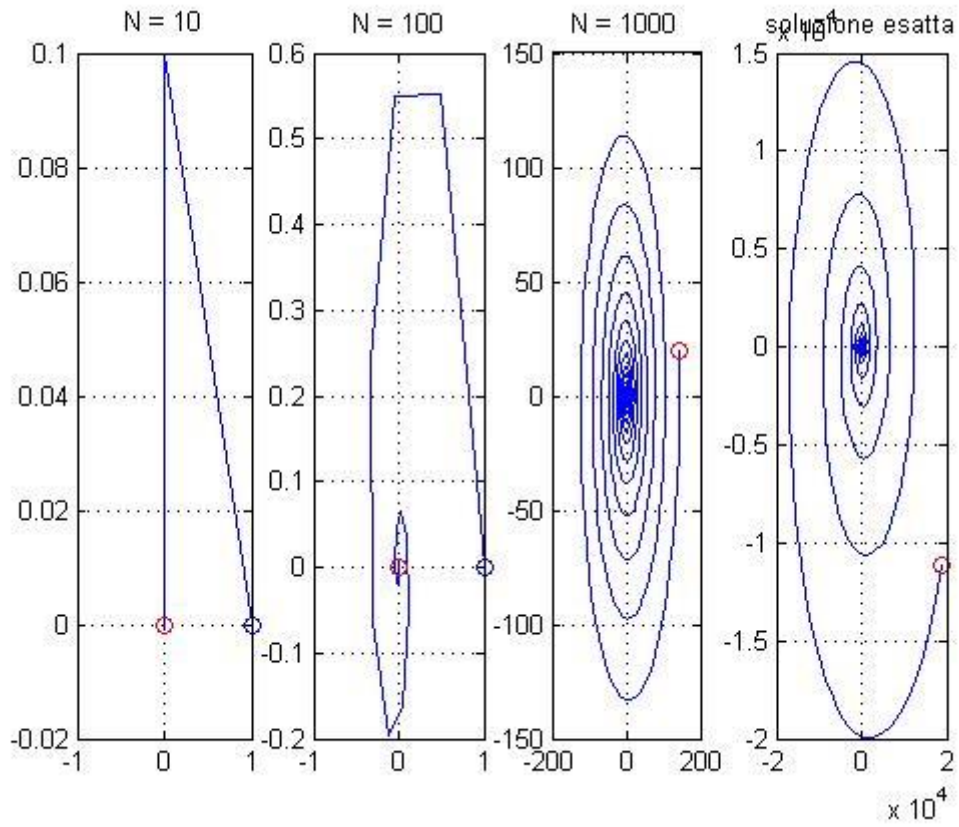
$$\lambda = 1+10i$$

$$T = 10$$

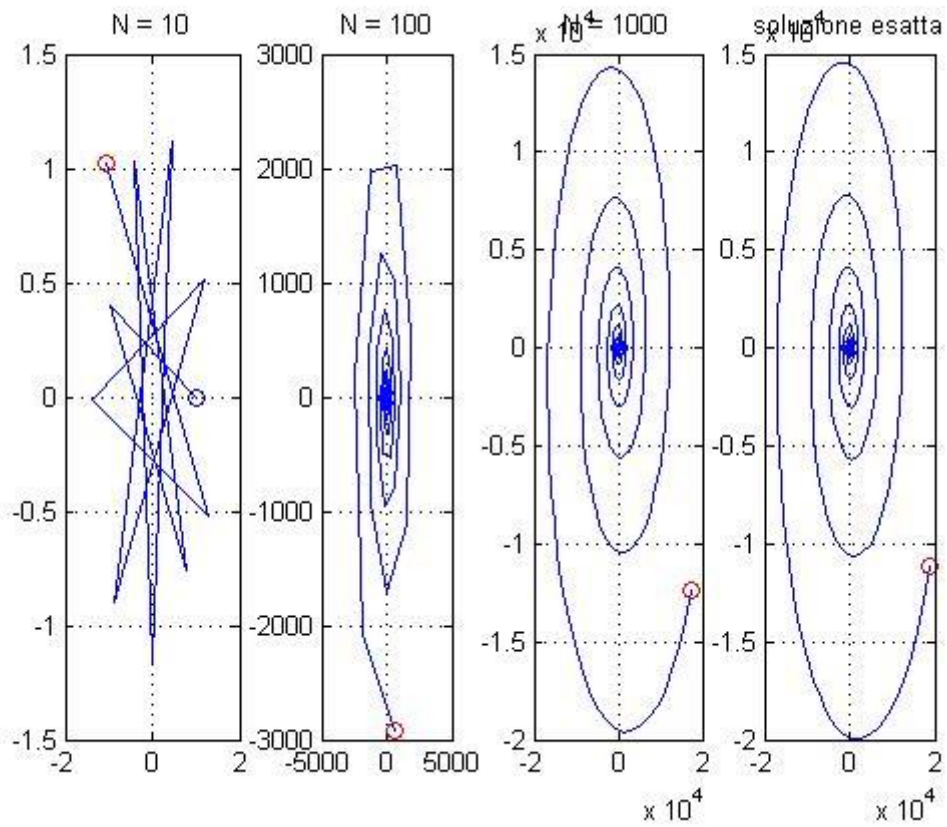
## Eulero Esplicito



## Eulero Implicito



## Trapezi - Punto Medio Implicito





### Esercizio 9.3

