**Taylor para tercer orden**

Y’ = -y + ty1/2 , 2 ≤ t ≤ 3 , y(2)=2 , h=0.25

F’(t,y) = d(f(t,y))/dt = d(y + t2/2 + y1/2(1-(3/2)t)

Dy/dt + 1/2(d(t2)/dt) + (d(y1/2)/dt)(1-(3/2)t) + (d(1-(3/2)t)/dt)(y1/2)

Y’ + t + (½(y-1/2)dy/dt)(1 –(3/2)t) – (3/2)y1/2

Y’ + t + (½y-1/2y’) (1 –(3/2)t) – (3/2)y1/2

Y’(1 + (½y-1/2) (1 –(3/2)t)) + t - (3/2)y1/2

(-y + ty1/2) + (-y + ty1/2) (½y-1/2) (1 – (3/2)t) + t - (3/2)y1/2

(-y + ty1/2) + (-y + ty1/2) (½y-1/2) – ((3/4)t y-1/2 )+ t - (3/2)y1/2

-y + ty1/2 - ½y1/2 + (3/4)t y1/2 + ½t -3/4t2 + t - (3/2)y1/2

-y + y1/2(t -1/2 + (3/4)t -3/2) + ½t -3/4t2 + t

-y + y1/2 ((7/4)t -2) + ½t -3/4t2 + t

-y + t((-3/4)t + ½ 1) + y1/2((7/4)t-2)

-y + y1/2((7/4)t – 2) + t((-3/4)t + 3/2)

Wi+1 = wi + h[f(ti,wi) + hf’(ti,wi)/2 +(h2/6)f’’(ti,wi)]

W1= 2.2440

W2= 2.7485

W3=3.1387

W4= 3.616