FINITE MOMENTS

C:\Macsyma\Macsyma2\system\init.lsp being loaded.

Batching the file C:\Macsyma\Macsyma2\user\mac-init.mac
Batchload done.

(c1) c(x):=(%pi*(1+x^2))^-1

(d1)
$$c(x) := \left(\pi \left(1 + x^2\right)\right)^{-1}$$

(c2) integrate(c(x),x,minf,inf)

C:\MACSYMA\Macsyma2\library1\combin.fas being loaded.
C:\MACSYMA\Macsyma2\library1\binoml.fas being loaded.

(d2) 1

(c3) integrate(c(x)*x,x,minf,inf)

Integral is not absolutely convergent.
Maybe you want to try the computation with INTANALYSIS:FALSE.

(c4) integrate(c(x)*x,x,-t,t)

(d4) 0

(c6) integrate(c(x)*x^2,x,-t,t)

(d6)
$$\frac{2\left(t - \operatorname{atan}(t)\right)}{\pi}$$

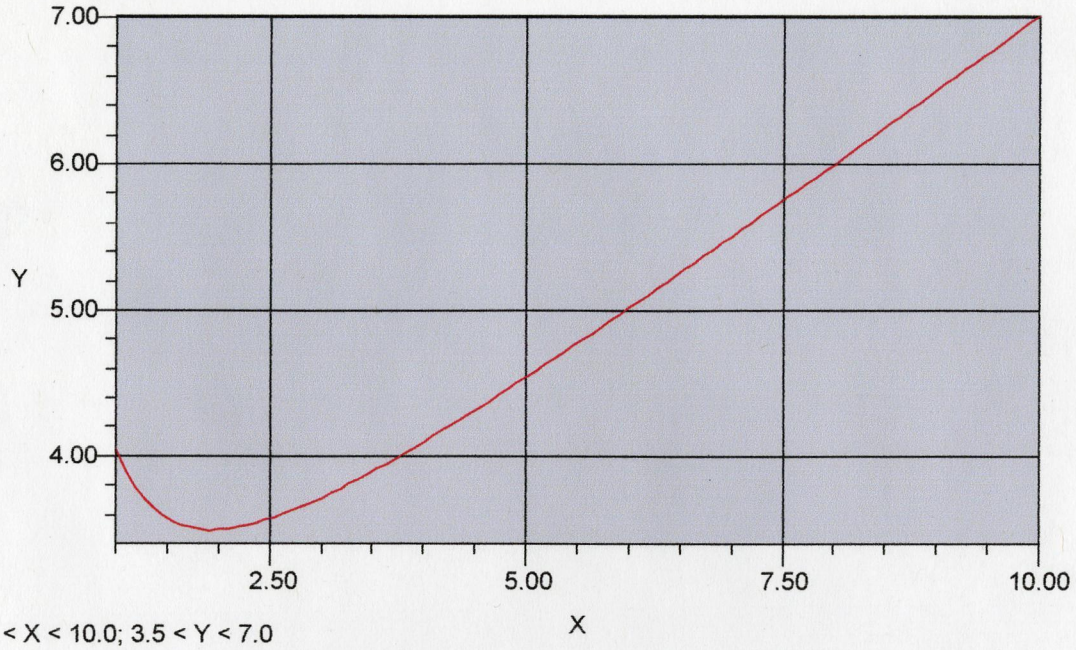
(c7) integrate(c(x)*x^4,x,-t,t)

(d7)
$$\frac{2\left(3\operatorname{atan}(t) + t^3 - 3t\right)}{3\pi}$$

(c9) d7/d6^2

(d9)
$$\frac{\pi\left(3\operatorname{atan}(t) + t^3 - 3t\right)}{6\left(t - \operatorname{atan}(t)\right)^2}$$

(c10) plot(d9,t,1,10)



1.0 < X < 10.0; 3.5 < Y < 7.0

(d10) done

(c23)

(c11)