3.04

fredag 26 januari 2024 21:44

$$F(s) = \frac{s}{s^4+1}$$

a)

$$-\frac{d}{ds}F(s) = \frac{3s^4-1}{(s^4+1)^2}$$

b)

$$F(s-2) = \frac{s+2}{(s+2)^4+1}$$

c)

$$e^{-2s}F(s) = \frac{e^{-2s}\,s}{s^4+1}$$

d)

$$sF(t) = \frac{s^2}{s^4+1}$$

e)

$$\frac{1}{121}F\left(\frac{s}{2}\right) = \frac{1}{2}\,\frac{s/2}{(s/2)^4+1} = \frac{1}{2}\cdot\frac{s}{2\left(s^4/16+1\right)} =$$

$$= \frac{s}{s^4/4+4} = \frac{4s}{s^4+16}$$