電気数学Ⅱ　小テスト８　解答例

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１．

(1) $F\left[u(-2t)\right]=F\left[u(-t)\right]=-\dfrac{1}{j\omega}+\pi\delta(-\omega)=-\dfrac{1}{j\omega}+\pi\delta(\omega)$

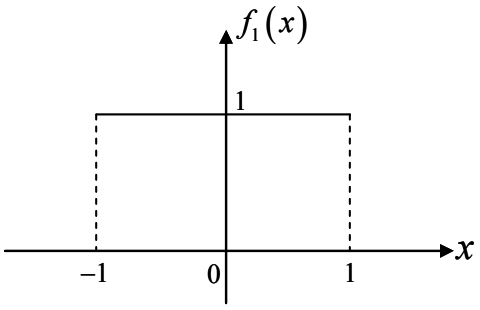
(2) $F\left[u(t)e^{-jt}\right]=\dfrac{1}{j(\omega+1)}+\pi\delta(\omega+1)$

(3) $F\left[u(t)\cos 2t\right]=\dfrac{1}{2}\left[\pi\delta(\omega-2)+\dfrac{1}{j(\omega-2)}+\pi\delta(\omega+2)+\dfrac{1}{j(\omega+2)}\right]$

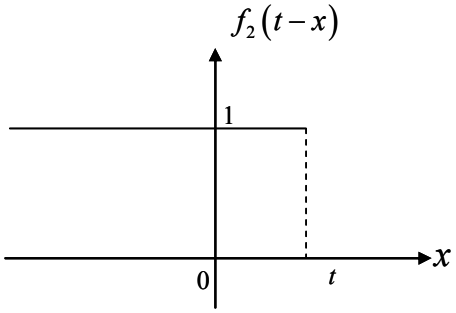
(4) $F\left[u'(t)\right]=1$

２．

(1)



(2)



(3) $t<-1$

(4) $-1\le t<1$

(5)

$$f_1(t)*f_2(t)=\int_{-1}^{t}1dx=t+1$$

(6) $t\ge 1$

(7)

$$f_1(t)*f_2(t)=\int_{-1}^{1}1dx=2$$

(8)