TABLA DE LA TRANSFORMADA DE FOURIER

	$f(t) = \mathcal{F}^{-1}[F(w)] = \dfrac{1}{2\pi}\displaystyle\int_{-\infty}^{+\infty} F(w)e^{jwt}\,dw$	$\mathcal{F}[f(t)] = F(w) = \displaystyle\int_{-\infty}^{+\infty} f(t)e^{-jwt}\,dt$
1	$af(t) + bg(t)$	$aF(w) + bG(w)$
2	$f(at)$	$\dfrac{1}{|a|}F\left(\dfrac{w}{a}\right)$
3	$f(-t)$	$F(-w)$
4	$f(t-a)$	$e^{-jwa}F(w)$
5	$e^{jat}f(t)$	$F(w-a)$
6	$f(t)\cos(at)$	$\dfrac{F(w-a) + F(w+a)}{2}$
7	$f(t)\,\mathrm{sen}(at)$	$\dfrac{F(w-a) - F(w+a)}{2j}$
8	$F(t)$	$2\pi f(-w)$
9	$f^{(n)}(t)$	$(jw)^n F(w)$
10	$\displaystyle\int_{-\infty}^{t} f(z)\,dz$	$\dfrac{1}{jw}F(w) + \pi F(0)\delta(w)$
11	$(-jt)^n f(t)$	$F^{(n)}(w)$
12	$(f*g)(t) = \displaystyle\int_{-\infty}^{\infty} f(u)g(t-u)\,du$	$F(w)G(w)$
13	$f(t)g(t)$	$\dfrac{1}{2\pi}F(w)*G(w)$
14	$e^{-at}u(t)$	$\dfrac{1}{jw+a}$, $a>0$
15	$e^{-a|t|}$	$\dfrac{2a}{w^2+a^2}$, $a>0$
16	e^{-at^2}	$\sqrt{\dfrac{\pi}{a}}\,e^{-\frac{w^2}{4a}}$, $a>0$

	$f(t) = \mathcal{F}^{-1}[F(w)] = \dfrac{1}{2\pi} \displaystyle\int\limits_{-\infty}^{+\infty} F(w)e^{jwt}dw$	$\mathcal{F}[f(t)] = F(w) = \displaystyle\int\limits_{-\infty}^{+\infty} f(t)e^{-jwt}dt$
17	$P_a(t)$	$\dfrac{a\,\text{sen}(wa/2)}{wa/2} \ , \ a > 0$
18	$\dfrac{\text{sen}(at)}{\pi t}$	$P_{2a}(w)$
19	$te^{-at}u(t)$	$\dfrac{1}{(jw+a)^2} \ , \ a > 0$
20	$\dfrac{t^{n-1}}{(n-1)!}e^{-at}\,u(t)$	$\dfrac{1}{(jw+a)^n} \ , \ a > 0$
21	$e^{-at}\text{sen}(bt)\,u(t)$	$\dfrac{b}{(jw+a)^2+b^2} \ , \ a > 0$
22	$e^{-at}\cos(bt)\,u(t)$	$\dfrac{jw+a}{(jw+a)^2+b^2} \ , \ a > 0$
23	$\dfrac{1}{a^2+t^2}$	$\dfrac{\pi}{a}e^{-a|w|}$
24	$\dfrac{\cos(bt)}{a^2+t^2}$	$\pi\left(\dfrac{e^{-a|w-b|}+e^{-a|w+b|}}{2}\right)$
25	$\dfrac{\text{sen}(bt)}{a^2+t^2}$	$\pi\left(\dfrac{e^{-a|w-b|}-e^{-a|w+b|}}{2aj}\right)$

TRANSFORMADA DE FOURIER DE FUNCIONES ESPECIALES

26	$\delta(t)$	1
27	$\delta(t-a)$	e^{-jwa}
28	$\delta'(t)$	jw
29	$\delta^{(n)}(t)$	$(jw)^n$
30	$u(t)$	$\pi\delta(w) + \dfrac{1}{jw}$
31	$u(t-a)$	$\pi\delta(w) + \dfrac{1}{jw}e^{-jwa}$
32	1	$2\pi\delta(w)$
33	t	$2\pi j\delta'(w)$
34	t^n	$2\pi j^n \delta^n(w)$
35	e^{jat}	$2\pi\delta(w-a)$
36	$\cos(at)$	$\pi\big(\delta(w-a) + \delta(w+a)\big)$
37	$sen(at)$	$-j\pi\big(\delta(w-a) - \delta(w+a)\big)$
38	$sen(at)\cdot u(t)$	$\dfrac{a}{a^2-w^2} + \dfrac{\pi}{2j}\big(\delta(w-a) - \delta(w+a)\big)$
39	$\cos(at)\cdot u(t)$	$\dfrac{jw}{a^2-w^2} + \dfrac{\pi}{2}\big(\delta(w-a) + \delta(w+a)\big)$
40	$tu(t)$	$j\pi\delta'(w) - \dfrac{1}{w^2}$
41	$1/t$	$j\pi - 2\pi j\cdot u(w)$
42	$1/t^n$	$\dfrac{(-jw)^{n-1}}{(n-1)!}\big(j\pi - 2\pi ju(w)\big)$
43	$sgn(t)$	$2/(jw)$
44	$\delta_T(t) = \displaystyle\sum_{n=-\infty}^{+\infty} \delta(t-nT)$	$\delta_{w_0(w)} = w_0 \displaystyle\sum_{n=-\infty}^{+\infty} \delta(w-nw_0)$, $w_0 = \dfrac{2\pi}{T}$
45	Sea f función periódica: $f(t) = \displaystyle\sum_{n=-\infty}^{+\infty} c_n \cdot e^{jnw_0 t}$	$2\pi \displaystyle\sum_{n=-\infty}^{+\infty} c_n \cdot \delta(w-nw_0)$