| f(t) | F(w) | |
|---------------------------|--|--|
| af(t) + bg(t) | aF(w) + bG(w) | |
| f(t-a) | $e^{-2\pi jaw}F(w)$ | |
| $f(t)e^{jat}$ | $F(w - \frac{a}{2\pi})$ | |
| f(at) | $\frac{1}{ a }F(\frac{w}{a})$ | |
| $\frac{d^n t f(t)}{dt^n}$ | $(2\pi jw)^n F(w)$ | |
| $t^n f(t)$ | $\left(\frac{j}{2\pi}\right)n\frac{d^nwF(w)}{dw^n}$ | |
| $(f \star g)(t)$ | F(w)G(w) | |
| f(t)cos(at) | $\frac{1}{2}(F(w-\frac{a}{2\pi})+F(w+\frac{a}{2\pi}))$ | |
| f(t)sin(at) | $\frac{1}{2j}(F(w-\frac{a}{2\pi})-F(w+\frac{a}{2\pi}))$ | |
| rect(at) | $\frac{1}{ a }sinc(w - \frac{a}{2\pi})$ | |
| sinc(at) | $\frac{1}{ a }rect(w - \frac{a}{2\pi})$ | |
| $e^{-at}u(t)$ | $\frac{1}{a-2\pi jw}$ | |
| 1 | $\delta(w)$ | |
| $\delta(t)$ | 1 | |
| e^{jat} | $\delta(w - \frac{a}{2\pi})$ | |
| cos(at) | $\frac{1}{2}(\delta(w - \frac{a}{2\pi}) + \delta(w + \frac{a}{2\pi}))$ | |
| sin(at) | $\frac{1}{2j}(\delta(w-\frac{a}{2\pi})-\delta(w+\frac{a}{2\pi}))$ | |
| $\frac{1}{t}$ | $-j\pi u(w)$ | |