

$F(x)$	$\hat{F}(u)$
$F(x-c)$	$e^{-icu} \hat{F}(u)$ $c$ real
$F(\frac{x}{B})$	$ B  \hat{F}(Bu)$ $B \neq 0$ pos/neg
$e^{-ax^2}$	$\sqrt{\frac{\pi}{a}} e^{-u^2/4a}$ $a > 0$
$e^{-a x }$	$\frac{2a}{u^2+a^2}$ $a > 0$
$\frac{1}{x^2+a^2}$	$\frac{\pi}{a} e^{-a u }$ $a > 0$
$\begin{cases} 1, &  x  < A \\ 0, &  x  > A \end{cases}$	$2 \frac{\sin(uA)}{u}$ $A > 0$
$\begin{cases} 1 -  \frac{x}{A} , &  x  < A \\ 0, &  x  > A \end{cases}$	$A \left( \frac{\sin(\frac{Au}{2})}{\frac{Au}{2}} \right)^2$ $A > 0$
$F * g$	$\hat{F}(u) \hat{g}(u)$
$F(x)g(x)$	$\frac{1}{2\pi} (\hat{F} * \hat{g})(u)$
$F'(x)$	$i u \hat{F}(u)$ so $f''(x) \rightarrow (iu)^2 \hat{F}(u)$
$\hat{F}(-x)$	$2\pi F(u)$

Recall too:

$$FT[f_{\text{odd}}] = -2i \text{FST}[F] = -2i \int_0^{\infty} f(x) \sin(ux) dx$$

$$FT[f_{\text{even}}] = 2 \text{FCT}[F] = 2 \int_0^{\infty} f(x) \cos(ux) dx$$