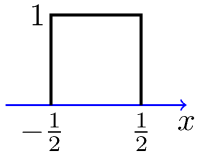
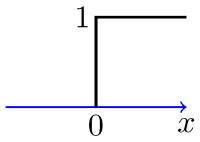
(1) $\operatorname{sinc}(x) = \frac{\sin(\pi x)}{\pi x}$

(2) $\Pi(x) = I_{[-\frac{1}{2},\frac{1}{2}]}(x)$



(3) $u(x)$



(4) $\Lambda(x)$

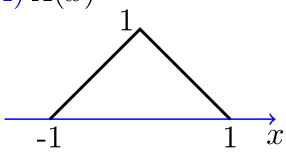


Figure 1. Some common functions.

Table of Fourier Transform Pairs

$\mathbf{x(t)}$	Fourier Transform $\mathbf{X(f)}$
$\delta(t)$	1
1	$\delta(f)$
$\delta(t-a)$	$e^{-i2\pi fa}$
$e^{i2\pi at}$	$\delta(f-a)$
$\cos(2\pi at)$	$\frac{1}{2}\delta(f-a)+\frac{1}{2}\delta(f+a)$
$\sin(2\pi at)$	$-\frac{1}{2i}\delta(f+a)+\frac{1}{2i}\delta(f-a)$
$\Pi(t)$	$\operatorname{sinc}(f)$
$\operatorname{sinc}(t)$	$\Pi(f)$
$\Lambda(t)$	$\operatorname{sinc}^2(f)$
$\operatorname{sinc}^2(t)$	$\Lambda(f)$
$e^{-at}u(t), a>0$	$\frac{1}{a+i2\pi f}$
$te^{-at}u(t), a>0$	$\frac{1}{(a+i2\pi f)^2}$