Integral	Expression
$\int e^{-j\omega t} dt$	$\frac{1}{-j\omega} e^{-j\omega t}$
$\int t e^{-j\omega t} dt$	$(\frac{t}{-j\omega} - \frac{1}{(-j\omega)^2}) e^{-j\omega t}$
$\int \sin(at) dt$	$-\frac{1}{a}\cos(at)$
$\int \cos(at) dt$	$\frac{1}{a}\sin(at)$

Integral	Expression
$\int t\sin(at) dt$	$\frac{1}{a^2}\sin(at) - \frac{t}{a}\cos(at)$
$\int t\cos(at) dt$	$\frac{1}{a^2}\cos(at) + \frac{t}{a}\sin(at)$
$\int \sin(\omega_0 t) e^{at} dt$	$\frac{a \sin(\omega_0 t) - \omega_0 \cos(\omega_0 t)}{a^2+\omega_0^2} e^{at}$
$\int \cos(\omega_0 t) e^{at} dt$	$\frac{a \cos(\omega_0 t) + \omega_0 \sin(\omega_0 t)}{a^2+\omega_0^2} e^{at}$

Half-rectified sine wave	$x(t) = \begin{cases} A\sin(\frac{2\pi}{T_0}t) & 0 \le t < T_0/2 \\ 0 & \frac{-T_0}{2} \le t < 0 \end{cases}$	$a_n = \begin{cases} \frac{A}{\pi(1-n^2)} & n\ even \\ 0 & n \text{ odd and } \neq \pm 1 \\ -j0.25nA & n = \pm 1 \end{cases}$
Full-rectified sine wave	$x(t) = \begin{cases} A\sin(\frac{2\pi}{T_0}t) & 0 \le t < T_0/2 \\ -A\sin(\frac{2\pi}{T_0}t) & -\frac{T_0}{2} \le t < 0 \end{cases}$	$a_n = \begin{cases} \frac{2A}{\pi(1-n^2)} & n \text{ even} \\ 0 & n\ odd \end{cases}$
Pulse train	$x(t) = \begin{cases} A & -\tau/2 \le t < \tau/2 \\ 0 & \text{otherwise} \end{cases},\ \tau < T_0$	$a_0 = \frac{A\tau}{T_0}, a_n = \frac{A\tau}{T_0}\frac{\sin(n\omega_0\tau/2)}{n\omega_0\tau/2}$
Triangular wave	$x(t) = \begin{cases} -\frac{2A}{\tau}(t - \frac{\tau}{2}) & 0 \le t < \frac{\tau}{2} \\ \frac{2A}{\tau}(t + \frac{\tau}{2}) & -\frac{\tau}{2} \le t < 0 \\ 0 & \text{otherwise} \end{cases}$ $,\ \tau < T_0$	$a_0 = \frac{A\tau}{2T_0},$ $a_n = \frac{8A}{T_0\tau}\frac{\sin^2(n\omega_0\tau/4)}{(n\omega_0)^2} = \frac{4A}{\pi n^2\omega_0\tau}\sin^2(\frac{n\omega_0\tau}{4})$
Sawtooth train	$x(t) = \begin{cases} \frac{A}{\tau}(t + \frac{\tau}{2}) & -\frac{\tau}{2} \le t < \frac{\tau}{2} \\ 0 & \text{otherwise} \end{cases}, \tau < T_0$	$a_0 = \frac{A\tau}{2T_0},$ $a_n = \frac{A}{T_0}[\frac{j}{n\omega_0}e^{-j\frac{n\omega_0\tau}{2}} - j\frac{2}{\tau(n\omega_0)^2}\sin(\frac{n\omega_0\tau}{2})]$