Transformata Laplace $E(s)$	Funcţia de timp $e(t)$	Transformata z	Transformata z modificată $E(z,m)$
1	$\delta(t)$	1	0
e^{-nTs}	$\delta(t-nT)$	z^{-n}	z^{-n-1+m}
$\frac{1}{s}$	$u(t)$	$\frac{z}{z-1}$	$\frac{1}{z-1}$
$\frac{1}{s^2}$	t	$\frac{Tz}{(z-1)^2}$	$\frac{mT}{z-1}+\frac{T}{(z-1)^2}$
$\frac{2!}{s^3}$	t^2	$\frac{T^2z(z+1)}{(z-1)^3}$	$T^2\left[\frac{m^2}{z-1}+\frac{2m+1}{(z-1)^2}+\frac{2}{(z-1)^3}\right]$
$\frac{(n-1)!}{s^n}$	t^{n-1}	$\lim\limits_{a\to 0}(-1)^{n-1}\frac{\partial^{n-1}}{\partial a^{n-1}}\left(\frac{z}{z-e^{-aT}}\right)$	$\lim\limits_{a\to 0}(-1)^{n-1}\frac{\partial^{n-1}}{\partial a^{n-1}}\left(\frac{e^{-amT}}{z-e^{-aT}}\right)$
$\frac{1}{s+a}$	e^{-at}	$\frac{z}{z-e^{-aT}}$	$\frac{e^{-amT}}{z-e^{-aT}}$
$\frac{1}{(s+a)(s+b)}$	$\frac{1}{b-a}(e^{-at}-e^{-bt})$	$\frac{1}{b-a}\left(\frac{z}{z-e^{-aT}}-\frac{z}{z-e^{-bT}}\right)$	$\frac{1}{b-a}\left(\frac{e^{-amT}}{z-e^{-aT}}-\frac{e^{-bmT}}{z-e^{-bT}}\right)$
$\frac{1}{s(s+a)}$	$\frac{1}{a}(u(t)-e^{-at})$	$\frac{1}{a}\frac{(1-e^{-aT})z}{(z-1)(z-e^{-aT})}$	$\frac{1}{a}\left(\frac{1}{z-1}-\frac{e^{-amT}}{z-e^{-aT}}\right)$
$\frac{1}{s^2(s+a)}$	$\frac{1}{a}\left(t-\frac{1-e^{-at}}{a}\right)$	$\frac{1}{b}\left[\frac{Tz}{(z-1)^2}-\frac{(1-e^{-aT})z}{a(z-1)(z-e^{-aT})}\right]$	$\frac{1}{a}\left[\frac{T}{(z-1)^2}+\frac{amT-1}{a(z-1)}+\frac{e^{-amT}}{a(z-e^{-aT})}\right]$
$\frac{(s+b)}{s^2(s+a)}$	$\frac{a-b}{a^2}u(t)+\frac{b}{a}t+\frac{1}{a}\left(\frac{b}{a}-1\right)e^{-at}$	$\frac{1}{a}\left[\frac{bTz}{(z-1)^2}+\frac{(a-b)(1-e^{-aT})z}{a(z-1)(z-e^{-aT})}\right]$	$\frac{1}{a}\left[\frac{bT}{(z-1)^2}+\left(bmT+1-\frac{b}{a}\right)\frac{1}{z-1}+\frac{b-a}{a}\frac{e^{-amT}}{(z-e^{-aT})}\right]$
$\frac{1}{s(s+a)(s+b)}$	$\frac{1}{ab}\left((u(t)+\frac{b}{a-b}e^{-at}-\frac{a}{a-b}e^{-bt}\right)$	$\frac{1}{ab}\left[\frac{z}{z-1}+\frac{bz}{(a-b)(z-e^{-aT})}-\frac{az}{(a-b)(z-e^{-aT})}\right]$	$\frac{1}{ab}\left[\frac{1}{z-1}+\frac{be^{-amT}}{(a-b)(z-e^{-aT})}-\frac{ae^{-bmT}}{(a-b)(z-e^{-bT})}\right]$
$\frac{1}{(s+a)^2}$	te^{-t}	$\frac{Tze^{-aT}}{(z-e^{-aT})^2}$	$\frac{Te^{-amT}[e^{-aT}+m(z-e^{-aT})]}{(z-e^{-aT})^2}$
$\frac{1}{s^3(s+a)}$	$\frac{1}{2a}\left(t^2-\frac{2}{a}t+\frac{2}{a^2}u(t)-\frac{2}{a^2}e^{-at}\right)$	$\frac{1}{a}\left[\frac{T^2z}{(z-1)^3}+\frac{(aT-2)Tz}{2a(z-1)^2}+\frac{z}{a^2(z-1)}-\frac{z}{a^2(z-e^{-aT})}\right]$	$\frac{1}{a}\left[\frac{T^2}{(z-1)^3}+\frac{T^2(m+\frac{1}{2})-T/a}{(z-1)^2}+\frac{(amT)^2/2-amT+1}{a^2(z-1)}-\frac{e^{-amT}}{a^2(z-e^{-aT})}\right]$
$\frac{a}{s^2+a^2}$	$\sin at$	$\frac{z\sin aT}{z^2-2z\cos aT+1}$	$\frac{z\sin amT+\sin(1-m)aT}{z^2-2z\cos aT+1}$
$\frac{s}{s^2+a^2}$	$\cos at$	$\frac{z(z-\cos aT)}{z^2-2z\cos aT+1}$	$\frac{z\cos amT-\cos(1-m)aT}{z^2-2z\cos aT+1}$
$\frac{a}{s^2-a^2}$	$\sin h\, at$	$\frac{z\sin haT}{z^2-2z\cos haT+1}$	$\frac{z\sin h\, amT+\sin h(1-m)aT}{z^2-2z\cos haT+1}$
$\frac{s}{s^2-a^2}$	$\cos h\, at$	$\frac{z(z-\cos haT)}{z^2-2z\cos haT+1}$	$\frac{z\cos hamT-\cos h(1-m)aT}{z^2-2z\cos haT+1}$
$\frac{a}{s(s^2+a^2)}$	$\frac{1}{a}(u(t)-\cos at)$	$\frac{1}{a}\left[\frac{z}{z-1}-\frac{z(z-\cos aT)}{z^2-2z\cos aT+1}\right]$	$\frac{1}{a}\left[\frac{1}{z-1}-\frac{z\cos amT-\cos(1-m)aT}{z^2-2z\cos aT+1}\right]$
$\frac{a^2}{s^2(s^2+a^2)}$	$t-\frac{1}{a}\sin at$	$\frac{Tz}{(z-1)^2}-\frac{1}{a}\frac{z\sin aT}{z^2-2z\cos aT+1}$	$\frac{mT}{z-1}+\frac{T}{(z-1)^2}-\frac{z\sin amT+\sin(1-m)aT}{a(z^2-2z\cos aT+1)}$
$\frac{1}{s(s+a)^2}$	$\frac{1}{a^2}[u(t)-(1+at)e^{-at}]$	$\frac{1}{a^2}\left[\frac{z}{z-1}-\frac{z}{z-e^{-aT}}-\frac{aTe^{-aT}z}{(z-e^{-aT})^2}\right]$	$\frac{1}{a^2}\left[\frac{1}{z-1}-\left(\frac{1+amT}{z-e^{-aT}}+\frac{aTe^{-aT}}{(z-e^{-aT})^2}\right)e^{-amT}\right]$
$\frac{1}{s^2(s+a)^2}$	$\frac{t}{a^2}-\frac{2}{a^3}u(t)+\left(\frac{t}{a^2}+\frac{2}{a^3}\right)e^{-at}$	$\frac{1}{a^3}\left[\frac{(aT+2)z-2z^2}{(z-1)^2}+\frac{2z}{z-e^{-aT}}+\frac{aTe^{-aT}z}{(z-e^{-aT})^2}\right]$	$\frac{1}{a^3}\left[\frac{aT}{(z-1)^2}+\frac{amT-2}{z-1}+\left(\frac{aTe^{-aT}}{(z-e^{-aT})^2}-\frac{amT-2}{z-e^{-aT}}\right)e^{-amT}\right]$
$\frac{1}{(s+a)^2+b^2}$	$\frac{1}{b}e^{-aT}\sin bt$	$\frac{1}{b}\left(\frac{ze^{-aT}\sin bT}{z^2-2ze^{-aT}\cos bT+e^{-2aT}}\right)$	$\frac{1}{b}\frac{e^{-amT}[z\sin bmT+e^{-aT}\sin(1-m)bT]}{z^2-2ze^{-aT}\cos bT+e^{-2aT}}$
$\frac{s+a}{(s+a)^2+b^2}$	$e^{-at}\cos bt$	$\frac{z^2-ze^{-aT}\cos bT}{z^2-2ze^{-aT}\cos bT+e^{-2aT}}$	$\frac{e^{-amT}[z\cos bmT+e^{-aT}\sin(1-m)bT]}{z^2-2ze^{-aT}\cos bT+e^{-2aT}}$
$\frac{1}{s[(s+a)^2+b^2]}$	$\frac{1}{a^2+b^2}[1-e^{-at}\sec\Phi\cos(bt+\Phi)]$ $\Phi=\mathrm{arctg}\left(\frac{-a}{b}\right)$	$\frac{1}{a^2+b^2}\left[\frac{z}{z-1}-\frac{z^2-ze^{-aT}\sec\Phi\cos(bT-\Phi)}{z^2-2ze^{-aT}\cos bT+e^{-2aT}}\right]$	$\frac{1}{a^2+b^2}\left[\frac{1}{z-1}-\frac{e^{-amT}\sec\Phi\{z\cos(bmT+\Phi)}{z^2-2ze^{-aT}\cos bT+e^{-2aT}}\times\frac{-e^{-aT}\cos[(1-m)bT-\Phi]\}}{1}\right]$