	$F(s)$	$f(t)$
1	$\int_0^\infty e^{-st} f(t)\,dt$	$f(t)$
2	$AF(s) + BG(s)$	$Af(t) + Bg(t)$
3	$sF(s) - f(+0)$	$f'(t)$
4	$s^n F(s) - s^{n-1} f(+0) - s^{n-2} f^{(1)}(+0) - \cdots - f^{(n-1)}(+0)$	$f^{(n)}(t)$
5	$\frac{1}{s} F(s)$	$\int_0^t f(\tau)\,d\tau$
6	$\frac{1}{s^2} F(s)$	$\int_0^t \int_0^\tau f(\lambda)\,d\lambda\,d\tau$
7	$F_1(s)F_2(s)$	$\int_0^t f_1(t-\tau)\, f_2(\tau)\,d\tau = f_1 * f_2$
8	$-F'(s)$	$tf(t)$
9	$(-1)^n F^{(n)}(s)$	$t^n f(t)$
10	$\int_s^\infty F(x)\,dx$	$\frac{1}{t} f(t)$
11	$F(s - a)$	$e^{at} f(t)$
12	$e^{-bs} F(s)$	$f(t - b)$, where $f(t) = 0$; $t < 0$
13	$F(cs)$	$\frac{1}{c} f\left(\frac{t}{c}\right)$
14	$F(cs - b)$	$\frac{1}{c} e^{(bt)/c} f\left(\frac{t}{c}\right)$
15	$\frac{\int_0^a e^{-st} f(t)\,dt}{1 - e^{-as}}$	$f(t + a) = f(t)$ periodic signal
16	$\frac{\int_0^a e^{-st} f(t)\,dt}{1 + e^{-as}}$	$f(t + a) = -f(t)$
17	$\frac{F(s)}{1 - e^{-as}}$	$f_1(t)$, the half-wave rectification of $f(t)$ in No. 16.
18	$F(s) \coth \frac{as}{2}$	$f_2(t)$, the full-wave rectification of $f(t)$ in No. 16.
19	$\frac{p(s)}{q(s)}, q(s) = (s - a_1)(s - a_2)\cdots(s - a_m)$	$\sum_1^m \frac{p(a_n)}{q'(a_n)} e^{a_n t}$
20	$\frac{p(s)}{q(s)} = \frac{\phi(s)}{(s-a)^r}$	$e^{at} \sum_{n=1}^{r} \frac{\phi^{(r-n)}(a)}{(r-n)!} \frac{t^{n-1}}{(n-1)!} + \cdots$

	$F(s)$	$f(t)$
1	s^n	$\delta^{(n)}(t)$ n^{th} derivative of the delta function
2	s	$\frac{d\delta(t)}{dt}$
3	1	$\delta(t)$
4	$\frac{1}{s}$	1
5	$\frac{1}{s^2}$	t
6	$\frac{1}{s^n}\,(n=1,2,\cdots)$	$\frac{t^{n-1}}{(n-1)!}$
7	$\frac{1}{\sqrt{s}}$	$\frac{1}{\sqrt{\pi t}}$
8	$s^{-3/2}$	$2\sqrt{\frac{t}{\pi}}$
9	$s^{-[n+(1/2)]}\,(n=1,2,\cdots)$	$\frac{2^n t^{n-(1/2)}}{1\cdot 3\cdot 5\cdots(2n-1)\sqrt{\pi}}$
10	$\frac{\Gamma(k)}{s^k}\,(k\geq 0)$	t^{k-1}
11	$\frac{1}{s-a}$	e^{at}
12	$\frac{1}{(s-a)^2}$	te^{at}
13	$\frac{1}{(s-a)^n}\,(n=1,2,\cdots)$	$\frac{1}{(n-1)!}t^{n-1}e^{at}$
14	$\frac{\Gamma(k)}{(s-a)^k}\,(k\geq 0)$	$t^{k-1}e^{at}$
15	$\frac{1}{(s-a)(s-b)}$	$\frac{1}{(a-b)}(e^{at}-e^{bt})$
16	$\frac{s}{(s-a)(s-b)}$	$\frac{1}{(a-b)}(ae^{at}-be^{bt})$
17	$\frac{1}{(s-a)(s-b)(s-c)}$	$-\frac{(b-c)e^{at}+(c-a)e^{bt}+(a-b)e^{ct}}{(a-b)(b-c)(c-a)}$
18	$\frac{1}{(s+a)}$	e^{-at} valid for complex a
19	$\frac{1}{s(s+a)}$	$\frac{1}{a}(1-e^{-at})$
20	$\frac{1}{s^2(s+a)}$	$\frac{1}{a^2}(e^{-at}+at-1)$
21	$\frac{1}{s^3(s+a)}$	$\frac{1}{a^2}\left[\frac{1}{a}-t+\frac{at^2}{2}-\frac{1}{a}e^{-at}\right]$
22	$\frac{1}{(s+a)(s+b)}$	$\frac{1}{(b-a)}(e^{-at}-e^{-bt})$
23	$\frac{1}{s(s+a)(s+b)}$	$\frac{1}{ab}\left[1+\frac{1}{(a-b)}(be^{-at}-ae^{-bt})\right]$

	$F(s)$	$f(t)$
24	$\frac{1}{s^2(s+a)(s+b)}$	$\frac{1}{(ab)^2}\left[\frac{1}{(a-b)}(a^2e^{-bt}-b^2e^{-at})+abt-a-b\right]$
25	$\frac{1}{s^3(s+a)(s+b)}$	$\frac{1}{(ab)}\left[\frac{a^3-b^3}{(ab)^2(a-b)}+\frac{1}{2}t^2-\frac{(a+b)}{ab}t+\frac{1}{(a-b)}\left(\frac{b}{a^2}e^{-at}-\frac{a}{b^2}e^{-bt}\right)\right]$
26	$\frac{1}{(s+a)(s+b)(s+c)}$	$\frac{1}{(b-a)(c-a)}e^{-at}+\frac{1}{(a-b)(c-b)}e^{-bt}+\frac{1}{(a-c)(b-c)}e^{-ct}$
27	$\frac{1}{s(s+a)(s+b)(s+c)}$	$\frac{1}{abc}-\frac{1}{a(b-a)(c-a)}e^{-at}-\frac{1}{b(a-b)(c-b)}e^{-bt}-\frac{1}{c(a-c)(b-c)}e^{-ct}$
28	$\frac{1}{s^2(s+a)(s+b)(s+c)}$	$\frac{ab(ct-1)-ac-bc}{(abc)^2}+\frac{1}{a^2(b-a)(c-a)}e^{-at}+\frac{1}{b^2(a-b)(c-b)}e^{-bt}+\frac{1}{c^2(a-c)(b-c)}e^{-ct}$
29	$\frac{1}{s^3(s+a)(s+b)(s+c)}$	$\frac{1}{(abc)^3}[(ab+ac+bc)^2-abc(a+b+c)]-\frac{ab+ac+bc}{(abc)^2}t+\frac{1}{2abc}t^2-\frac{1}{a^3(b-a)(c-a)}e^{-at}-\frac{1}{b^3(a-b)(c-b)}e^{-bt}-\frac{1}{c^3(a-c)(b-c)}\varepsilon^{-ct}$
30	$\frac{1}{s^2+a^2}$	$\frac{1}{a}\sin at$
31	$\frac{s}{s^2+a^2}$	$\cos at$
32	$\frac{1}{s^2-a^2}$	$\frac{1}{a}\sinh at$
33	$\frac{s}{s^2-a^2}$	$\cosh at$
34	$\frac{1}{s(s^2+a^2)}$	$\frac{1}{a^2}(1-\cos at)$
35	$\frac{1}{s^2(s^2+a^2)}$	$\frac{1}{a^3}(at-\sin at)$
36	$\frac{1}{(s^2+a^2)^2}$	$\frac{1}{2a^3}(\sin at-at\cos at)$
37	$\frac{s}{(s^2+a^2)^2}$	$\frac{t}{2a}\sin at$
38	$\frac{s^2}{(s^2+a^2)^2}$	$\frac{1}{2a}(\sin at+at\cos at)$
39	$\frac{s^2-a^2}{(s^2+a^2)^2}$	$t\cos at$
40	$\frac{s}{(s^2+a^2)(s^2+b^2)}(a^2\neq b^2)$	$\frac{\cos at-\cos bt}{b^2-a^2}$
41	$\frac{1}{(s-a)^2+b^2}$	$\frac{1}{b}e^{at}\sin bt$
42	$\frac{s-a}{(s-a)^2+b^2}$	$e^{at}\cos bt$
43	$\frac{1}{[(s+a)^2+b^2]^n}$	$\frac{-e^{-at}}{4^{n-1}b^{2n}}\sum_{r=1}^{n}\binom{2n-r-1}{n-1}(-2t)^{r-1}\frac{d^r}{dt^r}[\cos(bt)]$

	$F(s)$	$f(t)$
44	$\frac{s}{[(s+a)^2+b^2]^n}$	$\left\{\frac{e^{-at}}{4^{n-1}b^{2n}}\left\{\sum_{r=1}^{n}\binom{2n-r-1}{n-1}(-2t)^{r-1}\frac{d^r}{dt^r}[a\cos(bt)+b\sin(bt)]\right.\right.$ $\left.\left.-2b\sum_{r=1}^{n-1}r\binom{2n-r-2}{n-1}(-2t)^{r-1}\frac{d^r}{dt^r}[\sin(bt)]\right\}\right.$
45	$\frac{3a^2}{s^3+a^3}$	$e^{-at}-e^{(at)/2}\left(\cos\frac{at\sqrt{3}}{2}-\sqrt{3}\sin\frac{at\sqrt{3}}{2}\right)$
46	$\frac{4a^3}{s^4+4a^4}$	$\sin at\,\cosh at-\cos at\,\sinh at$
47	$\frac{s}{s^4+4a^4}$	$\frac{1}{2a^2}(\sin at\,\sinh at)$
48	$\frac{1}{s^4-a^4}$	$\frac{1}{2a^3}(\sinh at-\sin at)$
49	$\frac{s}{s^4-a^4}$	$\frac{1}{2a^2}(\cosh at-\cos at)$
50	$\frac{8a^3s^2}{(s^2+a^2)^3}$	$(1+a^2t^2)\sin at-\cos at$
51	$\frac{1}{s}\left(\frac{s-1}{s}\right)^n$	$L_n(t)=\frac{e^t}{n!}\frac{d^n}{dt^n}(t^ne^{-t})$ $[L_n(t)$ is the Laguerre polynomial of degree $n]$
52	$\frac{1}{(s+a)^n}$	$\frac{t^{(n-1)}e^{-at}}{(n-1)!}$ where n is a positive integer
53	$\frac{1}{s(s+a)^2}$	$\frac{1}{a^2}[1-e^{-at}-ate^{-at}]$
54	$\frac{1}{s^2(s+a)^2}$	$\frac{1}{a^3}[at-2+ate^{-at}+2e^{-at}]$
55	$\frac{1}{s(s+a)^3}$	$\frac{1}{a^3}\left[1-\left(\frac{1}{2}a^2t^2+at+1\right)e^{-at}\right]$
56	$\frac{1}{(s+a)(s+b)^2}$	$\frac{1}{(a-b)^2}\{e^{-at}+[(a-b)t-1]e^{-bt}\}$
57	$\frac{1}{s(s+a)(s+b)^2}$	$\frac{1}{ab^2}-\frac{1}{a(a-b)^2}e^{-at}-\left[\frac{1}{b(a-b)}t+\frac{a-2b}{b^2(a-b)^2}\right]e^{-bt}$
58	$\frac{1}{s^2(s+a)(s+b)^2}$	$\frac{1}{a^2(a-b)^2}e^{-at}+\frac{1}{ab^2}\left(t-\frac{1}{a}-\frac{2}{b}\right)+\left[\frac{1}{b^2(a-b)}t+\frac{2(a-b)-b}{b^3(a-b)^2}\right]e^{-bt}$
59	$\frac{1}{(s+a)(s+b)(s+c)^2}$	$\left\{\left[\frac{1}{(c-b)(c-a)}t+\frac{2c-a-b}{(c-a)^2(c-b)^2}\right]e^{-ct}\right.$ $\left.+\frac{1}{(b-a)(c-a)^2}e^{-at}+\frac{1}{(a-b)(c-b)^2}e^{-bt}\right.$
60	$\frac{1}{(s+a)(s^2+\omega^2)}$	$\frac{1}{a^2+\omega^2}e^{-at}+\frac{1}{\omega\sqrt{a^2+\omega^2}}\sin(\omega t-\phi);\quad \phi=\tan^{-1}\left(\frac{\omega}{a}\right)$
61	$\frac{1}{s(s+a)(s^2+\omega^2)}$	$\frac{1}{a\omega^2}-\frac{1}{a^2+\omega^2}\left(\frac{1}{\omega}\sin\omega t+\frac{a}{\omega^2}\cos\omega t+\frac{1}{a}e^{-at}\right)$

	$F(s)$	$f(t)$
62	$\frac{1}{s^2(s+a)(s^2+\omega^2)}$	$\begin{cases} \frac{1}{a\omega^2}t - \frac{1}{a^2\omega^2} + \frac{1}{a^2(a^2+\omega^2)}e^{-at} \\ \quad + \frac{1}{\omega^3\sqrt{a^2+\omega^2}}\cos(\omega t+\phi); \quad \phi = \tan^{-1}\left(\frac{a}{\omega}\right) \end{cases}$
63	$\frac{1}{[(s+a)^2+\omega^2]^2}$	$\frac{1}{2\omega^3}e^{-at}[\sin\omega t - \omega t\cos\omega t]$
64	$\frac{1}{s^2-a^2}$	$\frac{1}{a}\sinh at$
65	$\frac{1}{s^2(s^2-a^2)}$	$\frac{1}{a^3}\sinh at - \frac{1}{a^2}t$
66	$\frac{1}{s^3(s^2-a^2)}$	$\frac{1}{a^4}(\cosh at - 1) - \frac{1}{2a^2}t^2$
67	$\frac{1}{s^3+a^3}$	$\frac{1}{3a^2}\left[e^{-at} - e^{\frac{a}{2}t}\left(\cos\frac{\sqrt{3}}{2}at - \sqrt{3}\sin\frac{\sqrt{3}}{2}at\right)\right]$
68	$\frac{1}{s^4+4a^4}$	$\frac{1}{4a^3}(\sin at\ \cosh at - \cos at\ \sinh at)$
69	$\frac{1}{s^4-a^4}$	$\frac{1}{2a^3}(\sinh at - \sin at)$
70	$\frac{1}{[(s+a)^2-\omega^2]}$	$\frac{1}{\omega}e^{-at}\sinh\omega t$
71	$\frac{s+a}{s[(s+b)^2+\omega^2]}$	$\begin{cases} \frac{a}{b^2+\omega^2} - \frac{1}{\omega} + \sqrt{\frac{(a-b)^2+\omega^2}{b^2+\omega^2}}\,e^{-bt}\sin(\omega t+\phi); \\ \quad \phi = \tan^{-1}\left(\frac{\omega}{b}\right) + \tan^{-1}\left(\frac{\omega}{a-b}\right) \end{cases}$
72	$\frac{s+a}{s^2[(s+b)^2+\omega^2]}$	$\begin{cases} \frac{1}{b^2+\omega^2}[1+at] - \frac{2ab}{(b^2+\omega^2)^2} + \frac{\sqrt{(a-b)^2+\omega^2}}{\omega(b^2+\omega^2)}e^{-bt}\sin(\omega t+\phi) \\ \quad \phi = \tan^{-1}\left(\frac{\omega}{a-b}\right) + 2\tan^{-1}\left(\frac{\omega}{b}\right) \end{cases}$
73	$\frac{s+a}{(s+c)[(s+b)^2+\omega^2]}$	$\begin{cases} \frac{a-c}{(c-b)^2+\omega^2}\,e^{-ct} + \frac{1}{\omega}\sqrt{\frac{(a-b)^2+\omega^2}{(c-b)^2+\omega^2}}\,e^{-bt}\sin(\omega t+\phi) \\ \quad \phi = \tan^{-1}\left(\frac{\omega}{a-b}\right) - \tan^{-1}\left(\frac{\omega}{c-b}\right) \end{cases}$
74	$\frac{s+a}{s(s+c)[(s+b)^2+\omega^2]}$	$\begin{cases} \frac{a}{c(b^2+\omega^2)} + \frac{(c-a)}{c[(b-c)^2+\omega^2]}\,e^{-ct} \\ \quad - \frac{1}{\omega\sqrt{b^2+\omega^2}}\sqrt{\frac{(a-b)^2+\omega^2}{(b-c)^2+\omega^2}}\,e^{-bt}\sin(\omega t+\phi) \\ \quad \phi = \tan^{-1}\left(\frac{\omega}{b}\right) + \tan^{-1}\left(\frac{\omega}{a-b}\right) - \tan^{-1}\left(\frac{\omega}{c-b}\right) \end{cases}$
75	$\frac{s+a}{s^2(s+b)^3}$	$\frac{a}{b^3}t + \frac{b-3a}{b^4} + \left[\frac{3a-b}{b^4} + \frac{a-b}{2b^2}t^2 + \frac{2a-b}{b^3}t\right]e^{-bt}$

	$F(s)$	$f(t)$
76	$\frac{s+a}{(s+c)(s+b)^3}$	$\frac{a-c}{(b-c)^3}e^{-ct}+\left[\frac{a-b}{2(c-b)}t^2+\frac{c-a}{(c-b)^2}t+\frac{a-c}{(c-b)^3}\right]e^{-bt}$
77	$\frac{s^2}{(s+a)(s+b)(s+c)}$	$\frac{a^2}{(b-a)(c-a)}e^{-at}+\frac{b^2}{(a-b)(c-b)}e^{-bt}+\frac{c^2}{(a-c)(b-c)}e^{-ct}$
78	$\frac{s^2}{(s+a)(s+b)^2}$	$\frac{a^2}{(b-a)^2}e^{-at}+\left[\frac{b^2}{(a-b)}t+\frac{b^2-2ab}{(a-b)^2}\right]e^{-bt}$
79	$\frac{s^2}{(s+a)^3}$	$\left[2-2at+\frac{a^2}{2}t^2\right]e^{-at}$
80	$\frac{s^2}{(s+a)(s^2+\omega^2)}$	$\frac{a^2}{(a^2+\omega^2)}e^{-at}-\frac{\omega}{\sqrt{a^2+\omega^2}}\sin(\omega t+\phi);\ \ \phi=\tan^{-1}\left(\frac{\omega}{a}\right)$
81	$\frac{s^2}{(s+a)^2(s^2+\omega^2)}$	$\left\{\begin{array}{l}\left[\frac{a^2}{(a^2+\omega^2)}t-\frac{2a\omega^2}{(a^2+\omega^2)^2}\right]e^{-at}-\frac{\omega}{(a^2+\omega^2)}\sin(\omega t+\phi);\\ \quad\phi=-2\tan^{-1}\left(\frac{\omega}{a}\right)\end{array}\right.$
82	$\frac{s^2}{(s+a)(s+b)(s^2+\omega^2)}$	$\left\{\begin{array}{l}\frac{a^2}{(b-a)(a^2+\omega^2)}e^{-at}+\frac{b^2}{(a-b)(b^2+\omega^2)}e^{-bt}\\ \quad-\frac{\omega}{\sqrt{(a^2+\omega^2)(b^2+\omega^2)}}\sin(\omega t+\phi);\ \ \phi=-\left[\tan^{-1}\left(\frac{\omega}{a}\right)+\tan^{-1}\left(\frac{\omega}{b}\right)\right]\end{array}\right.$
83	$\frac{s^2}{(s^2+a^2)(s^2+\omega^2)}$	$-\frac{a}{(\omega^2-a^2)}\sin(at)-\frac{\omega}{(a^2-\omega^2)}\sin(\omega t)$
84	$\frac{s^2}{(s^2+\omega^2)^2}$	$\frac{1}{2\omega}(\sin\omega t+\omega t\cos\omega t)$
85	$\frac{s^2}{(s+a)[(s+b)^2+\omega^2]}$	$\left\{\begin{array}{l}\frac{a^2}{(a-b)^2+\omega^2}e^{-at}+\frac{1}{\omega}\sqrt{\frac{(b^2-\omega^2)^2+4b^2\omega^2}{(a-b)^2+\omega^2}}\,e^{-bt}\sin(\omega t+\phi)\\ \quad\phi=\tan^{-1}\left(\frac{-2b\omega}{b^2-\omega^2}\right)-\tan^{-1}\left(\frac{\omega}{a-b}\right)\end{array}\right.$
86	$\frac{s^2}{(s+a)^2[(s+b)^2+\omega^2]}$	$\left\{\begin{array}{l}\frac{a^2}{(a-b)^2+\omega^2}te^{-at}-2\left[\frac{a[(b-a)^2+\omega^2]+a^2(b-a)}{[(b-a)^2+\omega^2]^2}\right]e^{-at}\\ \quad+\frac{\sqrt{(b^2-\omega^2)^2+4b^2\omega^2}}{\omega[(a-b)^2+\omega^2]}e^{-bt}\sin(\omega t+\phi)\\ \quad\phi=\tan^{-1}\left(\frac{-2b\omega}{b^2-\omega^2}\right)-2\tan^{-1}\left(\frac{\omega}{a-b}\right)\end{array}\right.$
87	$\frac{s^2+a}{s^2(s+b)}$	$\frac{b^2+a}{b^2}e^{-bt}+\frac{a}{b}t-\frac{a}{b^2}$
88	$\frac{s^2+a}{s^3(s+b)}$	$\frac{a}{2b}t^2-\frac{a}{b^2}t+\frac{1}{b^3}[b^2+a-(a+b^2)e^{-bt}]$
89	$\frac{s^2+a}{s(s+b)(s+c)}$	$\frac{a}{bc}+\frac{(b^2+a)}{b(b-c)}e^{-bt}-\frac{(c^2+a)}{c(b-c)}e^{-ct}$
90	$\frac{s^2+a}{s^2(s+b)(s+c)}$	$\frac{b^2+a}{b^2(c-b)}e^{-bt}+\frac{c^2+a}{c^2(b-c)}e^{-ct}+\frac{a}{bc}t-\frac{a(b+c)}{b^2c^2}$

	$F(s)$	$f(t)$
91	$\frac{s^2+a}{(s+b)(s+c)(s+d)}$	$\frac{b^2+a}{(c-b)(d-b)}e^{-bt}+\frac{c^2+a}{(b-c)(d-c)}e^{-ct}+\frac{d^2+a}{(b-d)(c-d)}e^{-dt}$
92	$\frac{s^2+a}{s(s+b)(s+c)(s+d)}$	$\frac{a}{bcd}+\frac{b^2+a}{b(b-c)(d-b)}e^{-bt}+\frac{c^2+a}{c(b-c)(c-d)}e^{-ct}+\frac{d^2+a}{d(b-d)(d-c)}e^{-dt}$
93	$\frac{s^2+a}{s^2(s+b)(s+c)(s+d)}$	$\left\{\begin{array}{l}\frac{a}{bcd}t-\frac{a}{b^2c^2d^2}(bc+cd+db)+\frac{b^2+a}{b^2(b-c)(b-d)}e^{-bt}\\ \quad+\frac{c^2+a}{c^2(c-b)(c-d)}e^{-ct}+\frac{d^2+a}{d^2(d-b)(d-c)}e^{-dt}\end{array}\right.$
94	$\frac{s^2+a}{(s^2+\omega^2)^2}$	$\frac{1}{2\omega^3}(a+\omega^2)\sin\omega t-\frac{1}{2\omega^2}(a-\omega^2)t\cos\omega t$
95	$\frac{s^2-\omega^2}{(s^2+\omega^2)^2}$	$t\cos\omega t$
96	$\frac{s^2+a}{s(s^2+\omega^2)^2}$	$\frac{a}{\omega^4}-\frac{(a-\omega^2)}{2\omega^3}t\sin\omega t-\frac{a}{\omega^4}\cos\omega t$
97	$\frac{s(s+a)}{(s+b)(s+c)^2}$	$\frac{b^2-ab}{(c-b)^2}e^{-bt}+\left[\frac{c^2-ac}{b-c}t+\frac{c^2-2bc+ab}{(b-c)^2}\right]e^{-ct}$
98	$\frac{s(s+a)}{(s+b)(s+c)(s+d)^2}$	$\left\{\begin{array}{l}\frac{b^2-ab}{(c-b)(d-b)^2}e^{-bt}+\frac{c^2-ac}{(b-c)(d-c)^2}e^{-ct}+\frac{d^2-ad}{(b-d)(c-d)}te^{-dt}\\ \quad+\frac{a(bc-d^2)+d(db+dc-2bc)}{(b-d)^2(c-d)^2}e^{-dt}\end{array}\right.$
99	$\frac{s^2+a_1s+a_o}{s^2(s+b)}$	$\frac{b^2-a_1b+a_o}{b^2}e^{-bt}+\frac{a_o}{b}t+\frac{a_1b-a_o}{b^2}$
100	$\frac{s^2+a_1s+a_o}{s^3(s+b)}$	$\frac{a_1b-b^2-a_o}{b^3}e^{-bt}+\frac{a_o}{2b}t^2+\frac{a_1b-a_o}{b^2}t+\frac{b^2-a_1b+a_o}{b^3}$
101	$\frac{s^2+a_1s+a_o}{s(s+b)(s+c)}$	$\frac{a_o}{bc}+\frac{b^2-a_1b+a_o}{b(b-c)}e^{-bt}+\frac{c^2-a_1c+a_o}{c(c-b)}e^{-ct}$
102	$\frac{s^2+a_1s+a_o}{s^2(s+b)(s+c)}$	$\frac{a_o}{bc}t+\frac{a_1bc-a_o(b+c)}{b^2c^2}+\frac{b^2-a_1b+a_o}{b^2(c-b)}e^{-bt}+\frac{c^2-a_1c+a_o}{c^2(b-c)}e^{-ct}$
103	$\frac{s^2+a_1s+a_o}{(s+b)(s+c)(s+d)}$	$\frac{b^2-a_1b+a_o}{(c-b)(d-b)}e^{-bt}+\frac{c^2-a_1c+a_o}{(b-c)(d-c)}e^{-ct}+\frac{d^2-a_1d+a_o}{(b-d)(c-d)}e^{-dt}$
104	$\frac{s^2+a_1s+a_o}{s(s+b)(s+c)(s+d)}$	$\frac{a_o}{bcd}-\frac{b^2-a_1b+a_o}{b(c-b)(d-b)}e^{-bt}-\frac{c^2-a_1c+a_o}{c(b-c)(d-c)}e^{-ct}-\frac{d^2-a_1d+a_o}{d(b-d)(c-d)}e^{-dt}$
105	$\frac{s^2+a_1s+a_o}{s(s+b)^2}$	$\frac{a_o}{b^2}-\frac{b^2-a_1b+a_o}{b}te^{-bt}+\frac{b^2-a_o}{b^2}e^{-bt}$
106	$\frac{s^2+a_1s+a_o}{s^2(s+b)^2}$	$\frac{a_o}{b^2}t+\frac{a_1b-2a_o}{b^3}+\frac{b^2-a_1b+a_o}{b^2}t\varepsilon^{-bt}+\frac{2a_o-a_1b}{b^3}e^{-bt}$
107	$\frac{s^2+a_1s+a_o}{(s+b)(s+c)^2}$	$\frac{b^2-a_1b+a_o}{(c-b)^2}e^{-bt}+\frac{c^2-a_1c+a_o}{(b-c)}te^{-ct}+\frac{c^2-2bc+a_1b-a_o}{(b-c)^2}e^{-ct}$
108	$\frac{s^3}{(s+b)(s+c)(s+d)^2}$	$\left\{\begin{array}{l}\frac{b^3}{(b-c)(d-b)^2}e^{-bt}+\frac{c^3}{(c-b)(d-c)^2}e^{-ct}+\frac{d^3}{(d-b)(c-d)}te^{-dt}\\ \quad+\frac{d^2[d^2-2d(b+c)+3bc]}{(b-d)^2(c-d)^2}e^{-dt}\end{array}\right.$

	$F(s)$	$f(t)$
109	$\frac{s^3}{(s+b)(s+c)(s+d)(s+f)^2}$	$\left\{\begin{array}{l} \frac{b^3}{(b-c)(d-b)(f-b)^2}e^{-bt}+\frac{c^3}{(c-b)(d-c)(f-c)^2}e^{-ct} \\ \quad +\frac{d^3}{(d-b)(c-d)(f-d)^2}e^{-dt}+\frac{f^3}{(f-b)(c-f)(d-f)}te^{-ft} \\ \quad +\left[\frac{3f^2}{(b-f)(c-f)(d-f)}\right. \\ \quad \left. +\frac{f^3[(b-f)(c-f)+(b-f)(d-f)+(c-f)(d-f)]}{(b-f)^2(c-f)^2(d-f)^2}\right]\varepsilon^{-dt} \end{array}\right.$
110	$\frac{s^3}{(s+b)^2(s+c)^2}$	$-\frac{b^3}{(c-b)^2}te^{-bt}+\frac{b^2(3c-b)}{(c-b)^3}e^{-bt}-\frac{c^3}{(b-c)^2}te^{-ct}+\frac{c^2(3b-c)}{(b-c)^3}e^{-ct}$
111	$\frac{s^3}{(s+d)(s+b)^2(s+c)^2}$	$\left\{\begin{array}{l} -\frac{d^3}{(b-d)^2(c-d)^2}e^{-dt}+\frac{b^3}{(c-b)^2(b-d)}te^{-bt} \\ \quad +\left[\frac{3b^2}{(c-b)^2(d-b)}+\frac{b^3(c+2d-3b)}{(c-b)^3(d-b)^2}\right]e^{-bt}+\frac{c^3}{(b-c)^2(c-d)}te^{-ct} \\ \quad +\left[\frac{3c^2}{(b-c)^2(d-c)}+\frac{c^3(b+2d-3c)}{(b-c)^3(d-c)^2}\right]e^{-ct} \end{array}\right.$
112	$\frac{s^3}{(s+b)(s+c)(s^2+\omega^2)}$	$\left\{\begin{array}{l} \frac{b^3}{(b-c)(b^2+\omega^2)}e^{-bt}+\frac{c^3}{(c-b)(c^2+\omega^2)}e^{-ct} \\ \quad -\frac{\omega^2}{\sqrt{(b^2+\omega^2)(c^2+\omega^2)}}\sin(\omega t+\phi) \\ \quad \phi=\tan^{-1}\left(\frac{c}{\omega}\right)-\tan^{-1}\left(\frac{\omega}{b}\right) \end{array}\right.$
113	$\frac{s^3}{(s+b)(s+c)(s+d)(s^2+\omega^2)}$	$\left\{\begin{array}{l} \frac{b^3}{(b-c)(d-b)(b^2+\omega^2)}e^{-bt}+\frac{c^3}{(c-b)(d-c)(c^2+\omega^2)}e^{-ct} \\ \quad +\frac{d^3}{(d-b)(c-d)(d^2+\omega^2)}e^{-dt} \\ \quad -\frac{\omega^2}{\sqrt{(b^2+\omega^2)(c^2+\omega^2)(d^2+\omega^2)}}\cos(\omega t-\phi) \\ \quad \phi=\tan^{-1}\left(\frac{\omega}{b}\right)+\tan^{-1}\left(\frac{\omega}{c}\right)+\tan^{-1}\left(\frac{\omega}{d}\right) \end{array}\right.$
114	$\frac{s^3}{(s+b)^2(s^2+\omega^2)}$	$\left\{\begin{array}{l} -\frac{b^3}{b^2+\omega^2}te^{-bt}+\frac{b^2(b^2+3\omega^2)}{(b^2+\omega^2)^2}e^{-bt}-\frac{\omega^2}{(b^2+\omega^2)}\sin(\omega t+\phi) \\ \quad \phi=\tan^{-1}\left(\frac{b}{\omega}\right)-\tan^{-1}\left(\frac{\omega}{b}\right) \end{array}\right.$
115	$\frac{s^3}{s^4+4\omega^4}$	$\cos(\omega t)\cosh(\omega t)$
116	$\frac{s^3}{s^4-\omega^4}$	$\frac{1}{2}[\cosh(\omega t)+\cos(\omega t)]$

	$F(s)$	$f(t)$
117	$\frac{s^3+a_2s^2+a_1s+a_o}{s^2(s+b)(s+c)}$	$\frac{a_o}{bc}t-\frac{a_o(b+c)-a_1bc}{b^2c^2}+\frac{-b^3+a_2b^2-a_1b+a_o}{b^2(c-b)}e^{-bt}$ $+\frac{-c^3+a_2c^2-a_1c+a_o}{c^2(b-c)}e^{-ct}$
118	$\frac{s^3+a_2s^2+a_1s+a_o}{s(s+b)(s+c)(s+d)}$	$\frac{a_o}{bcd}-\frac{-b^3+a_2b^2-a_1b+a_o}{b(c-b)(d-b)}e^{-bt}-\frac{-c^3+a_2c^2-a_1c+a_o}{c(b-c)(d-c)}e^{-ct}$ $-\frac{-d^3+a_2d^2-a_1d+a_o}{d(b-d)(c-d)}e^{-dt}$
119	$\frac{s^3+a_2s^2+a_1s+a_o}{s^2(s+b)(s+c)(s+d)}$	$\frac{a_o}{bcd}t+\left[\frac{a_1}{bcd}-\frac{a_o(bc+bd+cd)}{b^2c^2d^2}\right]+\frac{-b^3+a_2b^2-a_1b+a_o}{b^2(c-b)(d-b)}\varepsilon^{-bt}$ $+\frac{-c^3+a_2c^2-a_1c+a_o}{c^2(b-c)(d-c)}e^{-ct}+\frac{-d^3+a_2d^2-a_1d+a_o}{d^2(b-d)(c-d)}e^{-dt}$
120	$\frac{s^3+a_2s^2+a_1s+a_o}{(s+b)(s+c)(s+d)(s+f)}$	$\frac{-b^3+a_2b^2-a_1b+a_o}{(c-b)(d-b)(f-b)}e^{-bt}+\frac{-c^3+a_2c^2-a_1c+a_o}{(b-c)(d-c)(f-c)}e^{-ct}$ $+\frac{-d^3+a_2d^2-a_1d+a_o}{(b-d)(c-d)(f-d)}e^{-dt}+\frac{-f^3+a_2f^2-a_1f+a_o}{(b-f)(c-f)(d-f)}e^{-ft}$
121	$\frac{s^3+a_2s^2+a_1s+a_o}{s(s+b)(s+c)(s+d)(s+f)}$	$\frac{a_o}{bcdf}-\frac{-b^3+a_2b^2-a_1b+a_o}{b(c-b)(d-b)(f-b)}e^{-bt}-\frac{-c^3+a_2c^2-a_1c+a_o}{c(b-c)(d-c)(f-c)}e^{-ct}$ $-\frac{-d^3+a_2d^2-a_1d+a_o}{d(b-d)(c-d)(f-d)}e^{-dt}-\frac{-f^3+a_2f^2-a_1f+a_o}{f(b-f)(c-f)(d-f)}e^{-ft}$
122	$\frac{s^3+a_2s^2+a_1s+a_o}{(s+b)(s+c)(s+d)(s+f)(s+g)}$	$\frac{-b^3+a_2b^2-a_1b+a_o}{(c-b)(d-b)(f-b)(g-b)}e^{-bt}+\frac{-c^3+a_2c^2-a_1c+a_o}{(b-c)(d-c)(f-c)(g-c)}e^{-ct}$ $+\frac{-d^3+a_2d^2-a_1d+a_o}{(b-d)(c-d)(f-d)(g-d)}e^{-dt}+\frac{-f^3+a_2f^2-a_1f+a_o}{(b-f)(c-f)(d-f)(g-f)}e^{-ft}$ $+\frac{-g^3+a_2g^2-a_1g+a_o}{(b-g)(c-g)(d-g)(f-g)}e^{-gt}$
123	$\frac{s^3+a_2s^2+a_1s+a_o}{(s+b)(s+c)(s+d)^2}$	$\frac{-b^3+a_2b^2-a_1b+a_o}{(c-b)(d-b)^2}e^{-bt}+\frac{-c^3+a_2c^2-a_1c+a_o}{(b-c)(d-c)^2}e^{-ct}$ $+\frac{-d^3+a_2d^2-a_1d+a_o}{(b-d)(c-d)}te^{-dt}$ $+\frac{\begin{array}{l}a_o(2d-b-c)+a_1(bc-d^2)\\+a_2d(db+dc-2bc)+d^2(d^2-2db-2dc+3bc)\end{array}}{(b-d)^2(c-d)^2}e^{-dt}$
124	$\frac{s^3+a_2s^2+a_1s+a_o}{s(s+b)(s+c)(s+d)^2}$	$\frac{a_o}{bcd^2}-\frac{-b^3+a_2b^2-a_1b+a_o}{b(c-b)(d-b)^2}e^{-bt}-\frac{-c^3+a_2c^2-a_1c+a_o}{c(b-c)(d-c)^2}e^{-ct}$ $-\frac{-d^3+a_2d^2-a_1d+a_o}{d(b-d)(c-d)}te^{-dt}-\frac{3d^2-2a_2d+a_1}{d(b-d)(c-d)}e^{-dt}$ $-\frac{(-d^3+a_2d^2-a_1d+a_o)[(b-d)(c-d)-d(b-d)-d(c-d)]}{d^2(b-d)^2(c-d)^2}e^{-dt}$

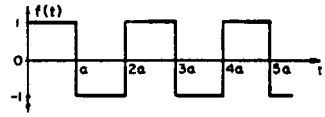
	$F(s)$	$f(t)$
125	$\frac{s^3+a_2s^2+a_1s+a_o}{(s+b)(s+c)(s+d)(s+f)^2}$	$\frac{-b^3+a_2b^2-a_1b+a_o}{(c-b)(d-b)(f-b)^2}e^{-bt}+\frac{-c^3+a_2c^2-a_1c+a_o}{(b-c)(d-c)(f-c)^2}e^{-ct}$ $+\frac{-d^3+a_2d^2-a_1d+a_o}{(b-d)(c-d)(f-d)^2}e^{-dt}+\frac{-f^3+a_2f^2-a_1f+a_o}{(b-f)(c-f)(d-f)}te^{-ft}$ $+\frac{3f^2-2a_2f+a_1}{(b-f)(c-f)(d-f)}e^{-ft}-\frac{(-f^3+a_2f^2-a_1f+a_o)[(b-f)(c-f)+(b-f)(d-f)+(c-f)(d-f)]}{(b-f)^2(c-f)^2(d-f)^2}e^{-ft}$
126	$\frac{s}{(s-a)^{3/2}}$	$\frac{1}{\sqrt{\pi t}}e^{at}(1+2at)$
127	$\sqrt{s-a}-\sqrt{s-b}$	$\frac{1}{2\sqrt{\pi t^3}}(e^{bt}-e^{at})$
128	$\frac{1}{\sqrt{s}+a}$	$\frac{1}{\sqrt{\pi t}}-ae^{a^2t}\operatorname{erfc}(a\sqrt{t})$
129	$\frac{\sqrt{s}}{s-a^2}$	$\frac{1}{\sqrt{\pi t}}+ae^{a^2t}\operatorname{erf}(a\sqrt{t})$
130	$\frac{\sqrt{s}}{s+a^2}$	$\frac{1}{\sqrt{\pi t}}-\frac{2a}{\sqrt{\pi}}e^{-a^2t}\int_0^{a\sqrt{t}}e^{\lambda^2}d\lambda$
131	$\frac{1}{\sqrt{s}(s-a^2)}$	$\frac{1}{a}e^{a^2t}\operatorname{erf}(a\sqrt{t})$
132	$\frac{1}{\sqrt{s}(s+a^2)}$	$\frac{2}{a\sqrt{\pi}}e^{-a^2t}\int_0^{a\sqrt{t}}e^{\lambda^2}d\pi$
133	$\frac{b^2-a^2}{(s-a^2)(b+\sqrt{s})}$	$e^{a^2t}[b-a\operatorname{erf}(a\sqrt{t})]-be^{b^2t}\operatorname{erfc}(b\sqrt{t})$
134	$\frac{1}{\sqrt{s}(\sqrt{s}+a)}$	$e^{a^2t}\operatorname{erfc}(a\sqrt{t})$
135	$\frac{1}{(s+a)\sqrt{s+b}}$	$\frac{1}{\sqrt{b-a}}e^{-at}\operatorname{erf}(\sqrt{b-a}\sqrt{t})$
136	$\frac{b^2-a^2}{\sqrt{s}(s-a^2)(\sqrt{s}+b)}$	$e^{a^2t}\left[\frac{b}{a}\operatorname{erf}(a\sqrt{t})-1\right]+e^{b^2t}\operatorname{erfc}(b\sqrt{t})$
137	$\frac{(1-s)^n}{s^{n+(1/2)}}$	$\frac{n!}{(2n)!\sqrt{\pi t}}H_{2n}(\sqrt{t})$ $\left[H_n(t)=\text{Hermite polynomial}=e^{x^2}\frac{d^n}{dx^n}(e^{-x^2})\right]$
138	$\frac{(1-s)^n}{s^{n+(3/2)}}$	$-\frac{n!}{\sqrt{\pi}\,(2n+1)!}H_{2n+1}(\sqrt{t})$
139	$\frac{\sqrt{s+2a}}{\sqrt{s}}-1$	$ae^{-at}[I_1(at)+I_o(at)]$ $[I_n(t)=j^{-n}J_n(jt)$ where J_n is Bessel's function of the first kind$]$
140	$\frac{1}{\sqrt{s+a}\sqrt{s+b}}$	$e^{-(1/2)(a+b)t}I_o\left(\frac{a-b}{2}t\right)$

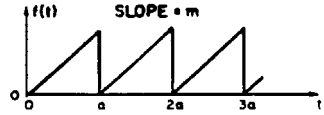
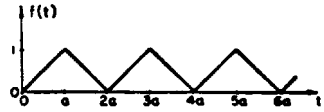
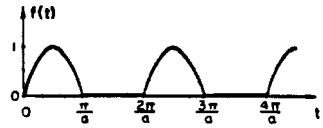
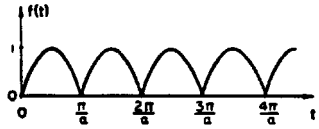
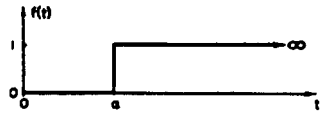
	$F(s)$	$f(t)$
141	$\frac{\Gamma(k)}{(s+a)^k(s+b)^k}(k \geq 0)$	$\sqrt{\pi}\left(\frac{t}{a-b}\right)^{k-(1/2)} e^{-(1/2)(a+b)t} I_{k-(1/2)}\left(\frac{a-b}{2}t\right)$
142	$\frac{1}{(s+a)^{1/2}(s+b)^{3/2}}$	$te^{-(1/2)(a+b)t}\left[I_o\left(\frac{a-b}{2}t\right)+I_1\left(\frac{a-b}{2}t\right)\right]$
143	$\frac{\sqrt{s+2a}-\sqrt{s}}{\sqrt{s+2a}+\sqrt{s}}$	$\frac{1}{t}e^{-at}I_1(at)$
144	$\frac{(a-b)^k}{(\sqrt{s+a}+\sqrt{s+b})^{2k}} \quad (k>0)$	$\frac{k}{t}e^{-(1/2)(a+b)t}I_k\left(\frac{a-b}{2}t\right)$
145	$\frac{(\sqrt{s+a}+\sqrt{s})^{-2v}}{\sqrt{s}\sqrt{s+a}}$	$\frac{1}{a^v}e^{-(1/2)(at)}I_v\left(\frac{1}{2}at\right)$
146	$\frac{1}{\sqrt{s^2+a^2}}$	$J_o(at)$
147	$\frac{(\sqrt{s^2+a^2}-s)^v}{\sqrt{s^2+a^2}} \quad (v>-1)$	$a^v J_v(at)$
148	$\frac{1}{(s^2+a^2)^k} \quad (k>0)$	$\frac{\sqrt{\pi}}{\Gamma(k)}\left(\frac{t}{2a}\right)^{k-(1/2)} J_{k-(1/2)}(at)$
149	$(\sqrt{s^2+a^2}-s)^k \quad (k>0)$	$\frac{ka^k}{t}J_k(at)$
150	$\frac{(s-\sqrt{s^2-a^2})^v}{\sqrt{s^2-a^2}} \quad (v>-1)$	$a^v I_v(at)$
151	$\frac{1}{(s^2-a^2)^k} \quad (k>0)$	$\frac{\sqrt{\pi}}{\Gamma(k)}\left(\frac{t}{2a}\right)^{k-(1/2)} I_{k-(1/2)}(at)$
152	$\frac{1}{s\sqrt{s+1}}$	$\text{erf}(\sqrt{t})$; $\text{erf}(y) \triangleq$ the error function $= \frac{2}{\sqrt{\pi}}\int_o^y e^{-u^2}du$
153	$\frac{1}{\sqrt{s^2+a^2}}$	$J_o(at)$; Bessel function of 1^{st} kind, zero order
154	$\frac{1}{\sqrt{s^2+a^2}+s}$	$\frac{J_1(at)}{at}$; J_1 is the Bessel function of 1^{st} kind, 1^{st} order
155	$\frac{1}{[\sqrt{s^2+a^2}+s]^N}$	$\frac{N}{a^N}\frac{J_N(at)}{t}$; $N=1,2,3,\cdots$, J_N is the Bessel function of 1^{st} kind, N^{th} order
156	$\frac{1}{s[\sqrt{s^2+a^2}+s]^N}$	$\frac{N}{a^N}\int_o^t \frac{J_N(au)}{u}du$; $N=1,2,3,\cdots$, J_N is the Bessel function of 1^{st} kind, N^{th} order
157	$\frac{1}{\sqrt{s^2+a^2}(\sqrt{s^2+a^2}+s)}$	$\frac{1}{a}J_1(at)$; J_1 is the Bessel function of 1^{st} kind, 1^{st} order
158	$\frac{1}{\sqrt{s^2+a^2}[\sqrt{s^2+a^2}+s]^N}$	$\frac{1}{a^N}J_N(at)$; $N=1,2,3,\cdots$, J_N is the Bessel function of 1^{st} kind, N^{th} order
159	$\frac{1}{\sqrt{s^2-a^2}}$	$I_o(at)$; I_o is the modified Bessel function of 1^{st} kind, zero order
160	$\frac{e^{-ks}}{s}$	$S_k(t)=\begin{cases}0 & \text{when } 0<t<k\\ 1 & \text{when } t>k\end{cases}$

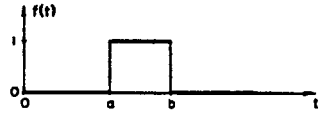
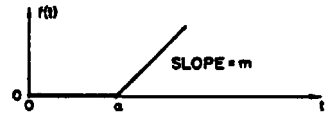
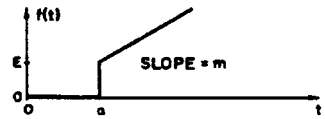
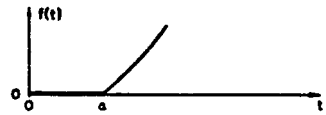
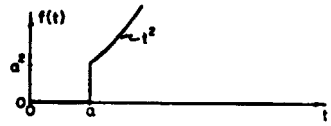
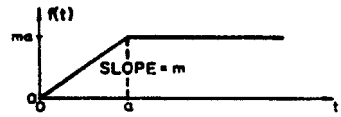
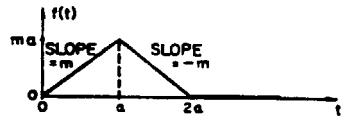
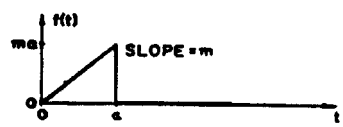
	$F(s)$	$f(t)$
161	$\frac{e^{-ks}}{s^2}$	$\begin{cases} 0 & \text{when } 0 < t < k \\ t-k & \text{when } t > k \end{cases}$
162	$\frac{e^{-ks}}{s^{\mu}} \quad (\mu > 0)$	$\begin{cases} 0 & \text{when } 0 < t < k \\ \frac{(t-k)^{\mu-1}}{\Gamma(\mu)} & \text{when } t > k \end{cases}$
163	$\frac{1-e^{-ks}}{s}$	$\begin{cases} 1 & \text{when } 0 < t < k \\ 0 & \text{when } t > k \end{cases}$
164	$\frac{1}{s(1-e^{-ks})} = \frac{1+\coth\frac{1}{2}ks}{2s}$	$S(k,t) = \begin{cases} n & \text{when} \\ & (n-1)k < t < n \quad k\,(n = 1,2,\cdots) \end{cases}$
165	$\frac{1}{s(e^{+ks}-a)}$	$S_k(t) = \begin{cases} 0 & \text{when } 0 < t < k \\ 1+a+a^2+\cdots+a^{n-1} & \\ \text{when } nk < t < (n+1)k\ (n = 1,2,\cdots) & \end{cases}$
166	$\frac{1}{s}\tanh ks$	$\begin{cases} M(2k,t) = (-1)^{n-1} & \\ \text{when } 2k(n-1) < t < 2nk & \\ (n = 1,2,\cdots) & \end{cases}$
167	$\frac{1}{s(1+e^{-ks})}$	$\begin{cases} \frac{1}{2}M(k,t) + \frac{1}{2} = \frac{1-(-1)^n}{2} & \\ \text{when } (n-1)k < t < nk & \end{cases}$
168	$\frac{1}{s^2}\tanh ks$	$\begin{cases} H(2k,t) \qquad [H(2k,t) = k + (r-k)(-1)^n \text{ where } t = 2kn + r; & \\ 0 \le r \le 2k;\ \ n = 0,1,2,\cdots] & \end{cases}$
169	$\frac{1}{s\sinh ks}$	$\begin{cases} 2S(2k,t+k) - 2 = 2(n-1) & \\ \text{when } (2n-3)k < t < (2n-1)k \quad (t > 0) & \end{cases}$
170	$\frac{1}{s\cosh ks}$	$\begin{cases} M(2k,t+3k) + 1 = 1 + (-1)^n & \\ \text{when } (2n-3)k < t < (2n-1)k \quad (t > 0) & \end{cases}$
171	$\frac{1}{s}\coth ks$	$\begin{cases} 2S(2k,t) - 1 = 2n - 1 & \\ \text{when } 2k(n-1) < t < 2kn & \end{cases}$
172	$\frac{k}{s^2+k^2}\coth\frac{\pi s}{2k}$	$\lvert\sin kt\rvert$
173	$\frac{1}{(s^2+1)(1-e^{-\pi s})}$	$\begin{cases} \sin t & \text{when } (2n-2)\pi < t < (2n-1)\pi \\ 0 & \text{when } (2n-1)\pi < t < 2n\pi \end{cases}$
174	$\frac{1}{s}\,e^{-k/s}$	$J_o(2\sqrt{kt})$
175	$\frac{1}{\sqrt{s}}\,e^{-k/s}$	$\frac{1}{\sqrt{\pi t}}\cos 2\sqrt{kt}$
176	$\frac{1}{\sqrt{s}}\,e^{k/s}$	$\frac{1}{\sqrt{\pi t}}\cosh 2\sqrt{kt}$
177	$\frac{1}{s^{3/2}}\,e^{-k/s}$	$\frac{1}{\sqrt{\pi k}}\sin 2\sqrt{kt}$
178	$\frac{1}{s^{3/2}}\,e^{k/s}$	$\frac{1}{\sqrt{\pi k}}\sinh 2\sqrt{kt}$

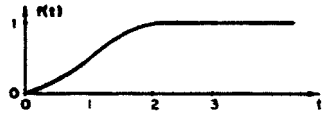
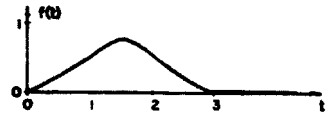
	$F(s)$	$f(t)$
179	$\frac{1}{s^{\mu}}\, e^{-k/s} \quad (\mu > 0)$	$\left(\frac{t}{k}\right)^{(\mu-1)/2} J_{\mu-1}(2\sqrt{kt})$
180	$\frac{1}{s^{\mu}}\, e^{k/s} \quad (\mu > 0)$	$\left(\frac{t}{k}\right)^{(\mu-1)/2} I_{\mu-1}(2\sqrt{kt})$
181	$e^{-k\sqrt{s}} \quad (k > 0)$	$\frac{k}{2\sqrt{\pi t^3}} \exp\left(-\frac{k^2}{4t}\right)$
182	$\frac{1}{s} e^{-k\sqrt{s}} \quad (k \geq 0)$	$\operatorname{erfc}\left(\frac{k}{2\sqrt{t}}\right)$
183	$\frac{1}{\sqrt{s}} e^{-k\sqrt{s}} \quad (k \geq 0)$	$\frac{1}{\sqrt{\pi t}} \exp\left(-\frac{k^2}{4t}\right)$
184	$s^{-3/2} e^{-k\sqrt{s}} \quad (k \geq 0)$	$2\sqrt{\frac{t}{\pi}} \exp\left(-\frac{k^2}{4t}\right) - k \operatorname{erfc}\left(\frac{k}{2\sqrt{t}}\right)$
185	$\frac{a e^{-k\sqrt{s}}}{s(a+\sqrt{s})} \quad (k \geq 0)$	$-e^{ak}\, e^{a^2 t} \operatorname{erfc}\left(a\sqrt{t} + \frac{k}{2\sqrt{t}}\right) + \operatorname{erfc}\left(\frac{k}{2\sqrt{t}}\right)$
186	$\frac{e^{-k\sqrt{s}}}{\sqrt{s}(a+\sqrt{s})} \quad (k \geq 0)$	$e^{ak}\, e^{a^2 t} \operatorname{erfc}\left(a\sqrt{t} + \frac{k}{2\sqrt{t}}\right)$
187	$\frac{e^{-k\sqrt{s(s+a)}}}{\sqrt{s(s+a)}}$	$\begin{cases} 0 & \text{when } 0 < t < k \\ e^{-(1/2)at} I_o(\frac{1}{2} a\sqrt{t^2 - k^2}) & \text{when } t > k \end{cases}$
188	$\frac{e^{-k\sqrt{s^2+a^2}}}{\sqrt{(s^2+a^2)}}$	$\begin{cases} 0 & \text{when } 0 < t < k \\ J_o(a\sqrt{t^2 - k^2}) & \text{when } t > k \end{cases}$
189	$\frac{e^{-k\sqrt{s^2-a^2}}}{\sqrt{(s^2-a^2)}}$	$\begin{cases} 0 & \text{when } 0 < t < k \\ I_o(a\sqrt{t^2 - k^2}) & \text{when } t > k \end{cases}$
190	$\frac{e^{-k(\sqrt{s^2+a^2}-s)}}{\sqrt{(s^2+a^2)}} \quad (k \geq 0)$	$J_o(a\sqrt{t^2 + 2kt})$
191	$e^{-ks} - e^{-k\sqrt{s^2+a^2}}$	$\begin{cases} 0 & \text{when } 0 < t < k \\ \frac{ak}{\sqrt{t^2 - k^2}} J_1(a\sqrt{t^2 - k^2}) & \text{when } t > k \end{cases}$
192	$e^{-k\sqrt{s^2+a^2}} - e^{-ks}$	$\begin{cases} 0 & \text{when } 0 < t < k \\ \frac{ak}{\sqrt{t^2 - k^2}} I_1(a\sqrt{t^2 - k^2}) & \text{when } t > k \end{cases}$
193	$\frac{a^{\nu} e^{-k\sqrt{s^2-a^2}}}{\sqrt{(s^2+a^2)}\left(\sqrt{s^2+a^2}+s\right)^{\nu}}$ $(\nu > -1)$	$\begin{cases} 0 & \text{when } 0 < t < k \\ \left(\frac{t-k}{t+k}\right)^{(1/2)\nu} J_{\nu}(a\sqrt{t^2 - k^2}) & \text{when } t > k \end{cases}$
194	$\frac{1}{s} \log s$	$\Gamma'(1) - \log t \qquad [\Gamma'(1) = -0.5772]$
195	$\frac{1}{s^k} \log s \quad (k > 0)$	$t^{k-1}\left\{\frac{\Gamma'(k)}{[\Gamma(k)]^2} \frac{\log t}{\Gamma(k)}\right\}$
196	$\frac{\log s}{s-a} \quad (a > 0)$	$e^{at}[\log a - \operatorname{Ei}(-at)]$

	$F(s)$	$f(t)$
197	$\frac{\log s}{s^2+1}$	$\cos t\,\mathrm{Si}(t)-\sin t\ \mathrm{Ci}(t)$
198	$\frac{s\log s}{s^2+1}$	$-\sin t\,\mathrm{Si}(t)-\cos t\ \mathrm{Ci}(t)$
199	$\frac{1}{s}\log(1+ks)\ \ (k>0)$	$-\mathrm{Ei}\left(-\frac{t}{k}\right)$
200	$\log\frac{s-a}{s-b}$	$\frac{1}{t}\left(e^{bt}-e^{at}\right)$
201	$\frac{1}{s}\log(1+k^2s^2)$	$-2\mathrm{Ci}\left(\frac{t}{k}\right)$
202	$\frac{1}{s}\log(s^2+a^2)\ \ (a>0)$	$2\log a-2\mathrm{Ci}(at)$
203	$\frac{1}{s^2}\log(s^2+a^2)\ \ (a>0)$	$\frac{2}{a}\left[at\log a+\sin at-at\,\mathrm{Ci}(at)\right]$
204	$\log\frac{s^2+a^2}{s^2}$	$\frac{2}{t}\left(1-\cos at\right)$
205	$\log\frac{s^2-a^2}{s^2}$	$\frac{2}{t}\left(1-\cosh at\right)$
206	$\arctan\frac{k}{s}$	$\frac{1}{t}\sin kt$
207	$\frac{1}{s}\arctan\frac{k}{s}$	$\mathrm{Si}(kt)$
208	$e^{k^2s^2}\mathrm{erfc}(ks)\ \ (k>0)$	$\frac{1}{k\sqrt{\pi}}\exp\left(-\frac{t^2}{4k^2}\right)$
209	$\frac{1}{s}e^{k^2s^2}\mathrm{erfc}(ks)\ \ (k>0)$	$\mathrm{erf}\left(\frac{t}{2k}\right)$
210	$e^{ks}\mathrm{erfc}(\sqrt{ks})\ \ (k>0)$	$\frac{\sqrt{k}}{\pi\sqrt{t(t+k)}}$
211	$\frac{1}{\sqrt{s}}\mathrm{erfc}(\sqrt{ks})$	$\begin{cases}0 & \text{when } 0<t<k\\ (\pi t)^{-1/2} & \text{when } t>k\end{cases}$
212	$\frac{1}{\sqrt{s}}e^{ks}\mathrm{erfc}(\sqrt{ks})\ \ (k>0)$	$\frac{1}{\sqrt{\pi(t+k)}}$
213	$\mathrm{erf}\left(\frac{k}{\sqrt{s}}\right)$	$\frac{1}{\pi t}\sin(2k\sqrt{t})$
214	$\frac{1}{\sqrt{s}}e^{k^2/s}\mathrm{erfc}\left(\frac{k}{\sqrt{s}}\right)$	$\frac{1}{\sqrt{\pi t}}e^{-2k\sqrt{t}}$
215	$-e^{as}\mathrm{Ei}(-as)$	$\frac{1}{t+a};\ (a>0)$
216	$\frac{1}{a}+se^{as}\mathrm{Ei}(-as)$	$\frac{1}{(t+a)^2};\ (a>0)$
217	$\left[\frac{\pi}{2}-\mathrm{Si}(s)\right]\cos s+\mathrm{Ci}(s)\sin s$	$\frac{1}{t^2+1}$

	$F(s)$	$f(t)$	
218	$K_o(ks)$	$\begin{cases} 0 & \text{when } 0 < t < k \\ (t^2 - k^2)^{-1/2} & \text{when } t > k \end{cases}$	[$K_n(t)$ is Bessel function of the second kind of imaginary argument]
219	$K_o(k\sqrt{s})$	$\frac{1}{2t}\exp\left(-\frac{k^2}{4t}\right)$	
220	$\frac{1}{s}\, e^{ks} K_1(ks)$	$\frac{1}{k}\sqrt{t(t+2k)}$	
221	$\frac{1}{\sqrt{s}}\, K_1(k\sqrt{s})$	$\frac{1}{k}\exp\left(-\frac{k^2}{4t}\right)$	
222	$\frac{1}{\sqrt{s}}\, e^{k/s} K_o\left(\frac{k}{s}\right)$	$\frac{2}{\sqrt{\pi t}}\, K_o(2\sqrt{2kt})$	
223	$\pi e^{-ks} I_o(ks)$	$\begin{cases} [t(2k-t)]^{-1/2} & \text{when } 0 < t < 2k \\ 0 & \text{when } t > 2k \end{cases}$	
224	$e^{-ks} I_1(ks)$	$\begin{cases} \frac{k-t}{\pi k\sqrt{t(2k-t)}} & \text{when } 0 < t < 2k \\ 0 & \text{when } t > 2k \end{cases}$	
225	$\frac{1}{s\sinh(as)}$	$2\sum_{k=0}^{\infty} u[t-(2k+1)a]$ 	
226	$\frac{1}{s\cosh s}$	$2\sum_{k=0}^{\infty} (-1)^k u(t-2k-1)$ 	
227	$\frac{1}{s}\tanh\left(\frac{as}{2}\right)$	$u(t) + 2\sum_{k=1}^{\infty} (-1)^k u(t-ak)$ square wave 	
228	$\frac{1}{2s}\left(1+\coth\frac{as}{2}\right)$	$\sum_{k=0}^{\infty} u(t-ak)$ stepped function 	

	$F(s)$	$f(t)$
		$mt - ma\sum_{k=1}^{\infty} u(t-ka)$
229	$\frac{m}{s^2} - \frac{ma}{2s}\left(\coth\frac{as}{2} - 1\right)$	saw – tooth function  $\frac{1}{a}\left[t + 2\sum_{k=1}^{\infty}(-1)^k (t-ka)\cdot u(t-ka)\right]$
230	$\frac{1}{s^2}\tanh\left(\frac{as}{2}\right)$	triangular wave  $\sum_{k=0}^{\infty}(-1)^k u(t-k)$
231	$\frac{1}{s(1+e^{-s})}$	 $\sum_{k=0}^{\infty}\left[\sin a\left(t - k\frac{\pi}{a}\right)\right]\cdot u\left(t - k\frac{\pi}{a}\right)$
232	$\frac{a}{(s^2+a^2)(1-e^{-\frac{\pi}{a}s})}$	half – wave rectification of sine wave  $[\sin(at)]\cdot u(t) + 2\sum_{k=1}^{\infty}\left[\sin a\left(t - k\frac{\pi}{a}\right)\right]\cdot u\left(t - k\frac{\pi}{a}\right)$
233	$\left[\frac{a}{(s^2+a^2)}\right]\coth\left(\frac{\pi s}{2a}\right)$	full – wave rectification of sine wave  $u(t-a)$
234	$\frac{1}{s}e^{-as}$	

	$F(s)$	$f(t)$
		$u(t-a)-u(t-b)$
235	$\frac{1}{s}(e^{-as}-e^{-bs})$	
		$m\cdot(t-a)\cdot u(t-a)$
236	$\frac{m}{s^2}e^{-as}$	
		$mt\cdot u(t-a)$
		or
237	$\left[\frac{ma}{s}+\frac{m}{s^2}\right]e^{-as}$	$\left[ma+m(t-a)\right]\cdot u(t-a)$ 
		$(t-a)^2\cdot u(t-a)$
238	$\frac{2}{s^3}e^{-as}$	
		$t^2\cdot u(t-a)$
239	$\left[\frac{2}{s^3}+\frac{2a}{s^2}+\frac{a^2}{s}\right]e^{-as}$	
		$mt\cdot u(t)-m(t-a)\cdot u(t-a)$
240	$\frac{m}{s^2}-\frac{m}{s^2}e^{-as}$	
		$mt-2m(t-a)\cdot u(t-a)+m(t-2a)\cdot u(t-2a)$
241	$\frac{m}{s^2}-\frac{2m}{s^2}e^{-as}+\frac{m}{s^2}e^{-2as}$	
		$mt-\left[ma+m(t-a)\right]\cdot u(t-a)$
242	$\frac{m}{s^2}-\left(\frac{ma}{s}+\frac{m}{s^2}\right)e^{-as}$	

	$F(s)$	$f(t)$
243	$\frac{(1-e^{-s})^2}{s^3}$	$0.5t^2$ for $0 \le t < 1$ $1-0.5(t-2)^2$ for $0 \le t < 2$ 1 for $2 \le t$ 
244	$\left[\frac{(1-e^{-s})}{s}\right]^3$	$0.5t^2$ for $0 \le t < 1$ $0.75-(t-1.5)^2$ for $1 \le t < 2$ $0.5(t-3)^2$ for $2 \le t < 3$ 0 for $3 < t$ 
245	$\frac{b}{s(s-b)}+(e^{ba}-1)$ $\left[\frac{1}{s+b}-\frac{s+\frac{b}{e^{ba}-1}}{s(s-b)}\right]e^{-as}$	$(e^{bt}-1)\cdot u(t)-(e^{bt}-1)\cdot u(t-a)+Ke^{-b(t-a)}\cdot u(t-a)$ where $K=(e^{ba}-1)$