

$F(s)$	$f(t)$
1. 1	$\delta(t)$ impulso unitario
2. $\frac{1}{s}$	$u(t)$ gradino unitario
3. $\frac{1}{s^2}$	t rampa
4. $\frac{1}{s^n}$	$\frac{1}{(n-1)!} t^{n-1} \quad n = \text{positivo intero}$
5. $\frac{1}{s} e^{-as}$	$u(t-a)$
6. $\frac{1}{s} (1 - e^{-as})$	$u(t) - u(t-a)$ impulso rettangolare
7. $\frac{1}{s+a}$	e^{-at}
8. $\frac{1}{(s+a)^n}$	$\frac{1}{(n-1)!} t^{n-1} e^{-at} \quad n = \text{positivo intero}$
9. $\frac{1}{s(s+a)}$	$\frac{1}{a} (1 - e^{-at})$
10. $\frac{1}{s(s+a)(s+b)}$	$\frac{1}{ab} \left(1 - \frac{b}{b-a} e^{-at} + \frac{a}{b-a} e^{-bt} \right)$
11. $\frac{s+\alpha}{s(s+a)(s+b)}$	$\frac{1}{ab} \left[\alpha - \frac{b(\alpha-a)}{b-a} e^{-at} + \frac{a(\alpha-b)}{b-a} e^{-bt} \right]$
12. $\frac{1}{(s+a)(s+b)}$	$\frac{1}{b-a} (e^{-at} - e^{-bt})$
13. $\frac{s}{(s+a)(s+b)}$	$\frac{1}{a-b} (ae^{-at} - be^{-bt})$
14. $\frac{s+\alpha}{(s+a)(s+b)}$	$\frac{1}{b-a} [(x-a)e^{-at} - (x-b)e^{-bt}]$

$F(s)$	$f(t)$
15. $\frac{1}{(s+a)(s+b)(s+c)}$	$\frac{e^{-at}}{(b-a)(c-a)} + \frac{e^{-bt}}{(c-b)(a-b)} + \frac{e^{-ct}}{(a-c)(b-c)}$
16. $\frac{s+\alpha}{(s+a)(s+b)(s+c)}$	$\frac{(\alpha-a)e^{-at}}{(b-a)(c-a)} + \frac{(\alpha-b)e^{-bt}}{(c-b)(a-b)} + \frac{(\alpha-c)e^{-ct}}{(a-c)(b-c)}$
17. $\frac{\omega}{s^2 + \omega^2}$	$\text{sen } \omega t$
18. $\frac{s}{s^2 + \omega^2}$	$\cos \omega t$
19. $\frac{s+\alpha}{s^2 + \omega^2}$	$\frac{\sqrt{\alpha^2 + \omega^2}}{\omega} \text{sen } (\omega t + \varphi) \quad \varphi = \text{tg}^{-1} \frac{\omega}{\alpha}$
20. $\frac{s \text{ sen } \theta + \omega \cos \theta}{s^2 + \omega^2}$	$\text{sen } (\omega t + \theta)$
21. $\frac{1}{s(s^2 + \omega^2)}$	$\frac{1}{\omega^2} (1 - \cos \omega t)$
22. $\frac{s+\alpha}{s(s^2 + \omega^2)}$	$\frac{\alpha}{\omega^2} - \frac{\sqrt{\alpha^2 + \omega^2}}{\omega^2} \cos (\omega t + \varphi) \quad \varphi = \text{tg}^{-1} \frac{\omega}{\alpha}$
23. $\frac{1}{(s+a)(s^2 + \omega^2)}$	$\frac{e^{-at}}{a^2 + \omega^2} + \frac{1}{\omega \sqrt{a^2 + \omega^2}} \text{sen } (\omega t - \varphi) \quad \varphi = \text{tg}^{-1} \frac{\omega}{a}$
24. $\frac{1}{(s+a)^2 + b^2}$	$\frac{1}{b} e^{-at} \text{sen } bt$
24a. $\frac{1}{s^2 + 2\zeta\omega_n s + \omega_n^2}$	$\frac{1}{\omega_n \sqrt{1-\zeta^2}} e^{-\zeta\omega_n t} \text{sen } \omega_n \sqrt{1-\zeta^2} t$
25. $\frac{s+a}{(s+a)^2 + b^2}$	$e^{-at} \cos bt$
26. $\frac{s+\alpha}{(s+a)^2 + b^2}$	$\frac{\sqrt{(\alpha-a)^2 + b^2}}{b} e^{-at} \text{sen } (bt + \varphi) \quad \varphi = \text{tg}^{-1} \frac{b}{\alpha-a}$
27. $\frac{1}{s[(s+a)^2 + b^2]}$	$\frac{1}{a^2 + b^2} + \frac{1}{b \sqrt{a^2 + b^2}} e^{-at} \text{sen } (bt - \varphi) \quad \varphi = \text{tg}^{-1} \frac{b}{-a}$
27a. $\frac{1}{s(s^2 + 2\zeta\omega_n s + \omega_n^2)}$	$\frac{1}{\omega_n^2} - \frac{1}{\omega_n^2 \sqrt{1-\zeta^2}} e^{-\zeta\omega_n t} \text{sen } (\omega_n \sqrt{1-\zeta^2} t + \varphi) \quad \varphi = \cos^{-1} \zeta$

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28. $\frac{s + \alpha}{s[(s + a)^2 + b^2]}$	$\frac{\alpha}{a^2 + b^2} + \frac{1}{b} \sqrt{\frac{(a - \alpha)^2 + b^2}{a^2 + b^2}} e^{-at} \sin(bt + \varphi)$ $\varphi = \operatorname{tg}^{-1} \frac{b}{\alpha - a} - \operatorname{tg}^{-1} \frac{b}{-a}$
29. $\frac{1}{(s + c)[(s + a)^2 + b^2]}$	$\frac{e^{-ct}}{(c - a)^2 + b^2} + \frac{e^{-at} \sin(bt - \varphi)}{b \sqrt{(c - a)^2 + b^2}}$ $\varphi = \operatorname{tg}^{-1} \frac{b}{c - a}$
30. $\frac{1}{s(s + c)[(s + a)^2 + b^2]}$	$\frac{1}{c(a^2 + b^2)} - \frac{e^{-ct}}{c[(c - a)^2 + b^2]} + \frac{e^{-at} \sin(bt - \varphi)}{b \sqrt{a^2 + b^2} \sqrt{(c - a)^2 + b^2}}$ $\varphi = \operatorname{tg}^{-1} \frac{b}{-a} + \operatorname{tg}^{-1} \frac{b}{c - a}$
31. $\frac{s + \alpha}{s(s + c)[(s + a)^2 + b^2]}$	$\frac{\alpha}{c(a^2 + b^2)} + \frac{(c - \alpha)e^{-ct}}{c[(c - a)^2 + b^2]} + \frac{\sqrt{(a - \alpha)^2 + b^2}}{b \sqrt{a^2 + b^2} \sqrt{(c - a)^2 + b^2}} e^{-at} \sin(bt + \varphi)$ $\varphi = \operatorname{tg}^{-1} \frac{b}{\alpha - a} - \operatorname{tg}^{-1} \frac{b}{-a} - \operatorname{tg}^{-1} \frac{b}{c - a}$
32. $\frac{1}{s^2(s + a)}$	$\frac{1}{a^2}(at - 1 + e^{-at})$
33. $\frac{1}{s(s + a)^2}$	$\frac{1}{a^2}(1 - e^{-at} - ate^{-at})$
34. $\frac{s + \alpha}{s(s + a)^2}$	$\frac{1}{a^2}[\alpha - \alpha e^{-at} + a(a - \alpha)te^{-at}]$
35. $\frac{s^2 + \alpha_1 s + \alpha_0}{s(s + a)(s + b)}$	$\frac{\alpha_0}{ab} + \frac{a^2 - \alpha_1 a + \alpha_0}{a(a - b)} e^{-at} - \frac{b^2 - \alpha_1 b + \alpha_0}{b(a - b)} e^{-bt}$
36. $\frac{s^2 + \alpha_1 s + \alpha_0}{s[(s + a)^2 + b^2]}$	$\frac{\alpha_0}{c^2} + \frac{1}{bc} [(a^2 - b^2 - \alpha_1 a + \alpha_0)^2 + b^2(\alpha_1 - 2a)^2]^{1/2} e^{-at} \sin(bt + \varphi)$ $\varphi = \operatorname{tg}^{-1} \frac{b(\alpha_1 - 2a)}{a^2 - b^2 - \alpha_1 a + \alpha_0} - \operatorname{tg}^{-1} \frac{b}{-a}$ $c^2 = a^2 + b^2$