## Tabela: Transformadas de Laplace

$$f(t) = \mathcal{L}^{-1} \left\{ F(s) \right\} \quad F(s) = \mathcal{L} \left\{ f(t) \right\}$$

2. 
$$e^{at}$$
  $\frac{1}{s-a}$ 

3. 
$$\operatorname{sen} bt$$
  $\frac{b}{s^2 + b^2}$ 

4. 
$$\cos bt$$
  $\frac{s}{s^2 + b^2}$ 

5. senh 
$$bt$$
  $\frac{b}{s^2 - b^2}$ 

6. 
$$\cosh bt$$
  $\frac{s}{s^2 - b^2}$ 

7. 
$$t^n \ (n = 1, 2, ...)$$
  $\frac{n!}{s^{n+1}}$ 

8. 
$$t^n e^{at} \ (n = 1, 2, ...)$$
  $\frac{n!}{(s-a)^{n+1}}$ 

9. 
$$t \operatorname{sen} bt$$
 
$$\frac{2bs}{\left(s^2 + b^2\right)^2}$$

10. 
$$t\cos bt$$
  $\frac{s^2 - b^2}{(s^2 + b^2)^2}$ 

11. 
$$e^{at} \operatorname{sen} bt \qquad \qquad \frac{b}{\left(s-a\right)^2 + b^2}$$

12. 
$$e^{at}\cos bt \qquad \frac{s-a}{(s-a)^2+b^2}$$

13. 
$$u_a(t)$$
  $\frac{e^{-as}}{s}$ 

$$14. \hspace{1.5cm} u_a(t)f(t-a) \hspace{1.5cm} e^{-as}F(s)$$