$$X(s) = \frac{s+2}{s^2+4s+3}$$

$$X(s) = \frac{s+2}{(s+1)(s+3)} = \frac{A}{s+1} + \frac{B}{s+3}$$

Pelo método dos resíduos:

$$A = \left.\frac{s+2}{s+3}\right|_{s=-1} = \frac{1}{2}$$

$$B = \left.\frac{s+2}{s+1}\right|_{s=-3} = \frac{-1}{-2} = \frac{1}{2}$$

$$\therefore X(s) = \frac{1/2}{(s+1)} + \frac{1/2}{(s+3)}$$

$$x(t) = \mathcal{L}^{-1}\{X(s)\} = \frac{1}{2}e^{-t} + \frac{1}{2}e^{-3t}$$