sábado, 12 de diciembre de 2020 08:14

$$\mathcal{L}\{e^{2t}\operatorname{senh} 3t - t^2 e^{-4t} + e^{t}\cos 4t\}$$

$$= \mathcal{L}\{e^{2t}\operatorname{senh} 3t\} - \mathcal{L}\{t^2 e^{-4t}\} + \mathcal{L}\{e^{t}\cos 4t\}$$

$$= \mathcal{L}\{\operatorname{senh} 3t\}\Big|_{s\to s-2} - \mathcal{L}\{t^2\}\Big|_{s\to s+4} + \mathcal{L}\{\cos 4t\}\Big|_{s\to s-1}$$

$$= \frac{3}{s^2-9}\Big|_{s\to s-2} - \frac{2}{s^3}\Big|_{s\to s+4} + \frac{s}{s^2+16}\Big|_{s\to s-1}$$

$$= \frac{3}{(s-2)^2-9} - \frac{2}{(s+4)^3} + \frac{s-1}{(s-1)^2+16}$$