

Séries e Equações Diferenciais

Lista 12

1. Usando Frações Parciais, resolva as Transformadas Inversas abaixo:

a) $\mathcal{L}^{-1} \left\{ \frac{s+1}{s^2+2} \right\}$

b) $\mathcal{L}^{-1} \left\{ \frac{1}{s^2+3s} \right\}$

c) $\mathcal{L}^{-1} \left\{ \frac{1}{s^2+s-20} \right\}$

d) $\mathcal{L}^{-1} \left\{ \frac{s}{s^2+2s-3} \right\}$

e) $\mathcal{L}^{-1} \left\{ \frac{0.9s}{(s-0,1)(s+0,2)} \right\}$

2. Transformadas inversas:

a. $\mathcal{L}^{-1} \left\{ \frac{1}{(s-1)(s+1)(s-2)} \right\}$

b. $\mathcal{L}^{-1} \left\{ \frac{s}{(s^2+4)(s+2)} \right\}$

c. $\mathcal{L}^{-1} \left\{ \frac{s+4}{(s^2+4)(s+2)} \right\}$

d. $\mathcal{L}^{-1} \left\{ \frac{1}{(s-1)(s+2)(s+4)} \right\}$

e. $\mathcal{L}^{-1} \left\{ \frac{2}{(s+2)(s-1)(s-3)} \right\}$

f. $\mathcal{L}^{-1} \left\{ \frac{3s+7}{s^2-2s-3} \right\}$