Tarea fracciones Parciales

$$X(s) = \frac{2s^3 + 8s^2 + 4s + 8}{s(s+1)(s^2+4s+8)} = \frac{K_1}{s} + \frac{K_2}{s+1} + \frac{A}{s+2+j2} + \frac{A^*}{s+2-j2}$$

$$K_1 = s\,X(s)\Big|_{s=0} = \frac{s(2s^3 + 8s^2 + 4s + 8)}{s(s+1)(s^2+4s+8)} = \frac{1}{1}$$

$$K_2 = (s+1)\,X(s)\Big|_{s=-1} = \frac{(s+1)(2s^3 + 8s^2 + 4s + 8)}{s(s+1)(s^2+4s+8)} = -2$$

$$A = (s+2+j2)\,X(s)\Big|_{s=-2-j2} = (s+2+j2)\quad 2s^3 + 8s^2$$

$$A^* = \frac{3}{2} - j\frac{1}{2} \longrightarrow X(s) = \frac{1}{s} = \frac{2}{s+1} + \frac{3/2 + j1/2}{s+2+j2} + \frac{3/2 - j1/2}{s+2-j2}$$