$F(s) = \frac{s^2+1}{s\cdot(s+1)(s-2)}$ $\quad f(1) = ?$

$$F(s) = \frac{A_1}{(s+1)} + \frac{A_2}{(s-2)} + \frac{B_1}{s}$$

$$f(t) = A_1 \cdot e^{-t} + A_2 \cdot e^{2\cdot t} + B \cdot 1(t)$$

$$A_1 = \frac{(s^2+1)\cdot(s+1)}{s\cdot(s+1)(s-2)}\Bigg|_{s=-1} = \frac{(-1)^2+1}{-1\cdot(-1-2)} = \frac{2}{-1\cdot(-3)} = \frac{2}{3}$$

$$A_2 = \frac{(s^2+1)\cdot(s-2)}{s\cdot(s+1)\cdot(s-2)}\Bigg|_{s=2} = \frac{2^2+1}{2\cdot(2+1)} = \frac{5}{6}$$

$$B = \frac{(s^2+1)\cdot s}{s\cdot(s+1)(s-2)}\Bigg|_{s=0} = \frac{0+1}{(0+1)(0-2)} = \frac{1}{-2} = -\frac{1}{2}$$

$$f(t) = \frac{2}{3}\cdot e^{-t} + \frac{5}{6}\cdot e^{2\cdot t} - \frac{1}{2}1(t)$$