$$P_4(s) = \frac{60\left(1+\frac{s}{2}\right)}{(s+1)(s-1)^2} \rightarrow F(s) = \frac{k'(s+2)}{(s+1)(s-1)^2}$$

$$f(s,k') = (s+1)(s-1)^2 + k'(s+2).$$ N.B. $p_1=-1$, $p_2=p_3=1$, $z_1=-2$.

$n=3$, $m=1 \Rightarrow n-m = 2$ rami all'∞. (2 positivi e 2 negativi)

Centro asintoti: $\sigma_a = \frac{1}{n-m}\left(\sum_{j=1}^{n} p_j - \sum_{i=1}^{m} z_i\right) = \frac{1}{2}(-1+1+1+2) = \frac{3}{2}$

Punti singolari ~~[illegible]~~ (oltre al polo doppio in $s=1$):

$$\sum_{j=1}^{n} \frac{1}{s-p_j} - \sum_{i=1}^{m} \frac{1}{s-z_i} = 0 \Rightarrow \frac{1}{s+1} + \frac{1}{s-1} + \frac{1}{s-1} - \frac{1}{s+2} = \phi$$

$$\Rightarrow \frac{1}{s+1} + \frac{2}{s-1} - \frac{1}{s+2} = 0 \qquad \frac{(s-1)(s+2) + 2(s+1)(s+2) - (s^2-1)}{(s+1)(s-1)(s+2)} = 0$$

$$\Rightarrow 2s^2 + 7s + 3 = 0. \quad s_{1,2} = \frac{-7 \pm \sqrt{49-24}}{4} = \begin{cases} -1/2 & (s_1) \\ -3 & (s_2) \end{cases}$$