$$F(z) = \frac{1}{(1-z^{-1})(1-0.75z^{-1})}$$

$$F(z) = \frac{1 + z^{-1} + 2z^{-2} + 3z^{-3}}{(1-0.25z^{-1})(1-0.5z^{-1})(1-0.75z^{-1})}$$

$$= \frac{z^3 + z^2 + 2z + 3}{(z-0.25)(z-0.5)(z-0.75)}$$

$$= \frac{z^3 + z^2 + 2z + 3}{z^3 - (3/2)z^2 + (11/16)z - 3/32}$$

$$z^3 - \left(\frac{3}{2}\right)z^2 + \left(\frac{11}{16}\right)z - \frac{3}{32} \;\Big)\; z^3 + z^2 + 2z + 3 \;\Big(\; 1 + \frac{5}{2}z^{-1} + \frac{81}{16}z^{-2} + \cdots$$

$$z^3 - \frac{3}{2}z^2 + \frac{11}{16}z - \frac{3}{32}$$

$$\frac{5}{2}z^2 + \frac{21}{16}z + \frac{99}{32}$$

$$\frac{5}{2}z^2 - \frac{15}{8}z + \frac{55}{32}$$

$$\frac{81}{16}z - \cdots$$

$$F(z) = 1 + \frac{5}{2}z^{-1} + \frac{81}{16}z^{-2} - - - -$$

$$F(z) = \sum_{n=0}^{\infty} f[n]z^{-1} = f[0] + f[1]z^{-1} + f[2]z^{-2} + \cdots$$

$$f[0] = 1 \quad f[1] = 5/2 \quad f[3] = +\frac{81}{16}$$