

syms s

$$H = 4 / (2 * s + 1)$$

H =

$$\frac{4}{2s+1}$$

$$U = 1 / s^2$$

U =

$$\frac{1}{s^2}$$

$$Y = H * U$$

Y =

$$\frac{4}{s^2 (2s+1)}$$

partfrac(Y)

ans =

$$\frac{16}{2s+1} - \frac{8}{s} + \frac{4}{s^2}$$

$$U = 2 / s$$

U =

$$\frac{2}{s}$$

$$Y = H * U$$

Y =

$$\frac{8}{s (2s+1)}$$

partfrac(Y)

ans =

$$\frac{8}{s} - \frac{16}{2s+1}$$

$$U = 1 / s^2 - \exp(-2 * s) / s^2$$

U =

$$\frac{1}{s^2} - \frac{e^{-2s}}{s^2}$$

$$Y = H * U$$

Y =

$$- \frac{4 \left( \frac{e^{-2s}}{s^2} - \frac{1}{s^2} \right)}{2s + 1}$$

partfrac(Y)

ans =

$$\frac{8e^{-2s} - 8}{s} - \frac{4e^{-2s} - 4}{s^2} - \frac{16e^{-2s} - 16}{2s + 1}$$