4-d

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$$\mathcal{L}^{-1}\left\{\frac{e^{-2s}}{s^2-5s+4}\right\} = \mu_2(t)\,\mathcal{L}^{-1}\left\{\frac{1}{s^2-5s+4}\right\}\Big|_{t\to t-2}$$

$$\frac{1}{s^2-5s+4} = \frac{1}{(s-1)(s-4)} = \frac{A}{s-1} + \frac{B}{s-4} = \frac{\frac{-1}{3}}{s-1} + \frac{\frac{1}{3}}{s-4}$$

$$1 = A(s-4) + B(s-1)$$

$$1 = s(A+B) - 4A - B$$

$$\begin{cases} A+B=0 \\ -4A-B=1 \end{cases}$$

$$A = \frac{-1}{3}$$

$$B = \frac{1}{3}$$

$$\Rightarrow \mu_2(t)\,\mathcal{L}^{-1}\left\{\frac{1/3}{s-4} - \frac{1/3}{s-1}\right\}\Big|_{t\to t-2}$$

$$\mu_2(t)\left[\frac{1}{3}e^{4t} - \frac{1}{3}e^{t}\right]_{t\to t-2}$$

$$\mu_2(t)\left[\frac{1}{3}e^{4(t-2)} - \frac{1}{3}e^{t-2}\right]$$