Ex: Find $v(t)$ if $V(s)=\dfrac{16}{s^2+10s+25}$.

Sol'n: We first factor the denominator.

$$s^2+10s+25=(s+5)^2$$

We can take the inverse transform immediately for this form of denominator:

$$v(t)=\mathcal{L}^{-1}\left\{\frac{16}{(s+5)^2}\right\}=\left[16te^{-5t}\right]u(t)$$

Note: We multiply by $u(t)$ to suggest that nothing is known about the signal before time zero.