Using Laplace transforms, solve the following differential equation for $y(t)$:

$$y''(t) - 5y'(t) + 6y(t) = t,$$

given that $y(0) = 1$ and $y'(0) = 0$.

Remember that:

$$\mathcal{L}\left\{f^{(n)}(t)\right\} = s^n F(s) - s^{n-1} f(0) - \cdots - f^{(n-1)}(0).$$